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OROGENITAL SYNDROME

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During the last four years many cases have been observed exhibiting a symptom complex mainly characterised by sore mouth, angular stomatitis and a dry, scaly, harsh, hyperkeratotic, itchy scrotum which is suggested here to be designated "orogenital syndrome". The attention of the patient is drawn either by the condition of the mouth or by that of the scrotum which ever is more severe. Sometimes the syndrome is detected in the course of a routine examination. The morbidity is limited to these two areas. In some cases, particularly in the adolescents, the general health is below par. The condition is seen in either sex. In women vaginitis and superficial ulceration or excoriation of the vulva also may co-exist, besides pruritus vulvæ with or without hyperkeratosis and sore mouth. It is more common during pregnancy when it is frequently associated with pregnancy neuritis. Dietetic errors seem to be the most probable ætiological factors in the causation of this disease.

Description

The mouth is red, raw and sore, and there is difficulty to chew and swallow. This results in a restriction of the diet which is already deficient thus aggravating the condition which progresses steadily. The pathological process does not involve the whole buccal mucosa, but is more common anteriorly. While the cheeks, the palate, the tongue, the lips and the angles of the mouth may all be affected, the last site always suffers. The affection is patchy in distribution. The tongue is frequently affected throughout its anterior half or two-thirds. There may also be superficial ulceration of the mucous membrane over these areas. The lower lips suffer more than the upper. Beginning first on the inner aspect of the mucosa, it extends to the exposed part also. Superficial ulcers also may develop and in extreme cases the exposed part of the lips become dry, rough and scaly and even cracks here and there. The condition is very painful. The disease commences at the angles of the mouth. The lips and the buccal mucous membrane often appear normal even though the labial angles show changes. A raw, red appearance constitutes the initial change but the mucous membrane in the labial angles soon gets sodden and whitish. This discolouration extends into the cheeks also to a slight extent and at times to the extent of an inch. When the associated redness and soreness of the mouth are not marked, the milk-white colour of the angles of the mouth and the adjacent part of the cheek may easily be mistaken for leucoplakia. In some cases

the labial angles instead of being superficially excoriated or ulcerated are only fissured and are very painful. These cracks and fissures, on healing, leave superficial white scars which closely resemble the leucoplakia buccalis and take a long time to disappear completely. The anterior half or two-thirds of the dorsum, sides and tip of the tongue also become raw and red. In some cases the sides and the tip only are involved when the unaffected middle portion is covered with a thin layer of fur. There may also be superficial ulcers and in many cases the sides and tip of the tongue show indentations due to the teeth. In extreme or long standing cases the tongue is furrowed. These furrows are not cracks or fissures but mere indentations. Some of these are superficial and short, some are long and yet others are deep. Occasionally the tongue presents a uniform, smooth and glazed appearance with or without furrows. The rawness and redness are at times limited to a V-shaped area in the anterior half or two-thirds, the point of the V being directed backwards. The cheeks and palate do not always become red or raw. They are usually affected in patches or often escape except for a small area at the anterior part. Exceptionally an associated rawness and sponginess of the gums are also seen.

The scrotum is invariably affected and in a small proportion of cases the tip and the anterior half of the skin of the prepuce and the ventral aspect of the penis are also involved. The skin of the scrotum becomes dry, rough, scaly and itchy. It begins at the most dependent part and then ascends slowly affecting the whole of the scrotal skin. But the morbid process is sharply limited and defined, not extending beyond the root of the scrotum, either to the pubis or to the groin. This delimitation is better appreciated when the scrotum is distended as in hydrocele. When the whole scrotum is affected it appears a little stiff, the skin having lost its smoothness and softness and assumes a state midway between contraction and relaxation. In appearance it is dry, stiff and finely scaly and on feeling it is dry, harsh, irregular and rough. There is no pain or tenderness but the part is itchy. Though the scrotum is in intimate contact with the inner side of the thighs and though there is plenty of moisture and warmth, the inguino-scrotal angles and the contact areas are singularly free. As already pointed out the tip and the anterior half or more of the skin of the prepuce also show the change. A narrow strip, about half an inch wide, of the ventral aspect of the penis along its whole length is also seen affected. When the penile skin is affected it also presents the same appearance as the scrotal skin in being rough, dry, finely scaly and itchy besides being whitish. In well developed cases the involved skin extends from the tip of the prepuce to the peno-scrotal angle and thus becomes continuous with the skin of the scrotum.

In women the labia majora, the labia minora and the prepuce of the clitoris are very itchy, greyish-white and finely scaly. In advanced cases they become rough, hyperkeratotic and scaly. In a proportion of cases there is an associated vaginitis and in some cases superficial small ulcers or excoriations of the vulva and vaginal mucous membrane are noticed which resemble the small ulcers seen in the buccal cavity. No urethritis has so far been observed in men or women. The condition is also observed in infants. In them besides the affection of the mouth and the scrotum, excoriation of the anal margin also is observed.

None of these patients showed signs of beri-beri, pellagra, scurvy, Betot's spots, xerophthalmia or keratomalacia, conditions usually assigned to vitamin deficiency.

This condition was recognised for the first time as a clinical entity in the early part of 1934 and subsequently it was decided to call it the "orogenital syndrome". In 1934 eighty-one cases were seen in the Venereal and Dermatological departments of the King George Hospital, Vizagapatam; 130 cases in 1935; 54 cases in 1936 and 139 cases in 1937 thus making a total of 404.

Monthly statement of cases seen

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1934	—	4	—	4	3	—	6	11	14	13	13	13	81
1935	19	13	8	7	8	9	13	8	20	6	6	13	130
1936	2	7	2	6	1	—	2	7	9	2	8	8	54
1937	11	9	12	10	9	10	3	14	12	15	19	15	139
Total	32	33	22	27	21	19	24	40	55	36	46	49	404

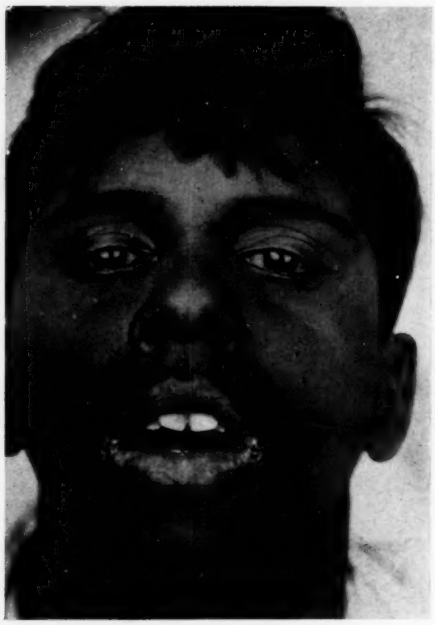

FIG. 1. Angular stomatitis and dry, scaly, and cracked lips.

FIG. 3. External genitalia showing the characteristic appearance of the scrotum.

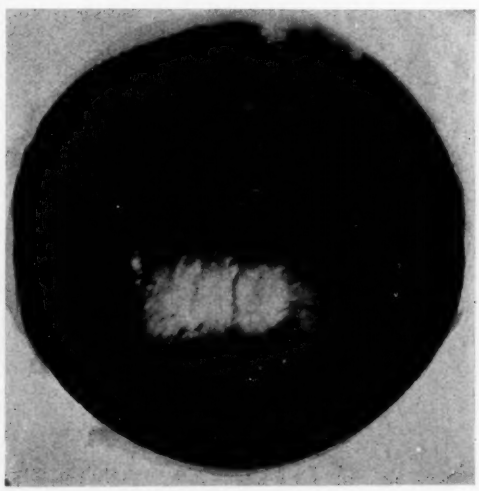

FIG. 2. Stomatitis and deeply fissured tongue.

FIG. 4. External genitalia showing the appearance of the vulva.

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Seasonal variation: Seasonal variations in the incidence of deficiency diseases as xerophthalmia and keratomalacia have been noticed by some observers. Mori (1904) found them developing in Japan in the "diarrhœal months", *i.e.*, July to September. Stephenson (1910) found keratomalacia occurring in England in the diarrhœa season (summer) and xerosis in spring and summer. In Germany, Holland and Belgium the incidence is greater during December to May with the peak in March or April and in Manchuria the season is February and March. Thus seasonal incidence when it exists, varies in different countries. The number of cases seen and the length of the period of observation are not sufficient to draw any conclusion regarding the seasonal variation of this syndrome. The available data show that the incidence is greater during the cold season.

Age: The youngest patient in the series was a child of three months old and the oldest was fifty-eight years. From the table of age incidence it will be seen that up to 10 years there were only 8 cases, from 11 to 30 years 338 cases and above 30 years 58 cases. Thus the greatest incidence was in the age period 11 to 30 years, the period of rapid growth and development. Loewenthal (1935) observes that vitamin A deficiency manifests itself more rapidly in the young than in the older children. This syndrome is rarely seen in children but frequently during the adolescent and early adult periods.

Table showing the age periods

Age periods	No. of cases	Age periods	No. of cases	
0 to 5	2	31 to 35	24	
6 to 10	6	36 to 40	21	
11 to 15	57	41 to 45	6	
16 to 20	140	46 to 50	4	Total 404
21 to 25	71	51 to 55	1	
26 to 30	70	56 to 60	2	

Sex: Though both sexes are affected the large majority of the cases under review is in the male. This is probably due to the greater number of patients observed being males.

Pathology

The epidermis shows hyperplasia and parakeratinisation. Stratum lucidum has disappeared. Stratum granulosum shows no changes though broken in places. There is no appreciable pigmentary change in the stratum germinativum but there is abnormal melanin deposit in the chromatophores of the papillæ. The epithelial plugs are hypertrophied. In long standing cases the superficial layers of the dermis show well marked chronic inflammatory changes with small granulomatous collections in which lymphocytes, fibroblasts and reticulo-endothelial cells form a marked feature. The hair follicles show degenerative changes. Sebaceous and sweat glands appear normal. The change from a higher columnar or cubical epithelium to a squamous or stratified one with hyperplasia and parakeratinisation has been described in vitamin A deficiency by many observers in the respiratory, alimentary and genito-urinary tracts and in the ducts of the para-ocular and other glands. As the affected parts in this syndrome are only lined with the lowest type of epithelium the changes noted are only hyperplasia and para or hyperkeratinisation and these are essentially the same in vitamin A deficiency also. The cellular infiltration is probably the result of changes due to the scratching.

Bacteriology

Scrapings from the scrotum and the angles of the mouth were examined for the detection of any special organism other than the usual ones but nothing to incriminate was found. Cultures were also made from these situations with no abnormal findings. That the syndrome is not the result of any microbic infection is also borne out by the fact that the affection does not spread to the adjacent area or to the opposing surfaces.

Course

It has not been possible to ascertain the length of time the disease takes to develop nor its time of onset with any exactitude. The disease runs a chronic course with periods of remissions and exacerbations, at no time disappearing completely. Cases of five and six years' duration have come under our observation. Even in such cases the disease is found strictly localised.

Treatment

Different kinds of treatment were tried with a view to find out the real ætiological factor. External applications to the genitalia and gargles for the mouth were tried with no effect. Keratolytics, antiseptics and fungicides made little or no impression on the scrotal condition. Autoclaved yeast and untreated

yeast showed only slight improvement. Intramuscular injections of liver extract (Campolan) also showed only temporary improvement, particularly in the mouth condition. On continuing the liver therapy the syndrome disappeared but reappeared soon after. So also oral administration of cod-liver-oil and its external application to the scrotum gave only slight relief. Addition of milk, six to eight ounces a day, to the routine diet showed definite change in the mouth but little alteration in the scrotum. Next, the effect of a well-balanced diet was tried and this gave complete cure in a week or ten days. A few of these patients were admitted in the hospital as in-patients and put on what is known as "ordinary Indian" diet. As a placebo they were given caramel mixture and sterile dry dressing to the scrotum. It is surprising to see that the sores in the mouth healed, the rawness and redness disappeared and the scrotum became smooth, soft and normal within a short period of a week or ten days. The glazed red tongue resumed its normal appearance and the leucoplakic patches at the angles of the mouth and the adjacent area of the cheeks became thinner and less white, completely disappearing in a few days.

Enquiries into the routine diet of these patients revealed a grossly defective one. Detailed consideration of it showed that the diet consisted mostly of milled rice with very little vegetables but plenty of chillies and once or twice a week small quantities of meat or fish. It will thus be seen that the diet is lacking in animal fat, proteins, fruits and milk in any form. Even butter-milk does not find a place in their dietary. Thus the diet is deficient in vitamins also besides being ill-balanced. As large quantities of rice are consumed the patients do not appear thin or famished. A balanced diet containing all the proximate principles in proper proportions with the accessory food factors had the desired effect rapidly.

The "ordinary Indian" hospital diet is composed of the following:—

Sugar	1 oz.
Rice	12 oz.
Dhall	2 oz.
Tamarind	¼ oz.
Onions	¼ oz.
Salt	¾ oz.
Plantain	1 oz.
Gingelly oil	½ oz.
Bread	8 oz.
Coffee (Sugar 2 oz., milk 6 oz.) & coffee powder ½ oz.) ...	2 pints
Pepper water	½ pint
Butter milk	½ pint
Country vegetables ...	4 oz.
Curry powder	½ oz.
Coriander & Karipalli leaves	10 grs.
Black gram	½ dr.

To this nucleus diet is added 3 oz. of mutton for two days; 4 oz. of country vegetables for two days; 4 oz. of potatoes for two days and two eggs for a day in the week. This contains approximately 71 g. of protein, 20 g. of fat and 560 g. of carbohydrates with a total caloric value of 2780.

Statement showing the Constituents of the Hospital "Ordinary Indian" Diet.

Nature of food stuff	Quantity	Protein g.	Fat. g.	Carbohydrates g.	Ca. g.	Ph. g.	Fe. mg.	Caloric value
Sugar	3 oz.	—	—	82·5	—	—	—	349·3
Bread	8 oz.	16·0	2·79	118·0	—	—	—	574·5
Milk	6 oz.	5·6	6·12	8·1	0·2	0·15	0·4	113·8
Rice	12 oz.	23·9	1·87	269·0	0·02	0·36	3·46	1214·5
Butter Milk	10 oz.	2·38	3·06	3·97	0·085	·085	2·21	54·48
Dhall	2 oz.	12·89	0·97	32·48	0·07	0·14	4·99	194·75
Tamarind	¼ oz.	0·213	—	4·79	0·012	·007	0·763	20·5
Onions	¼ oz.	0·127	—	0·93	—	—	—	4·1
Black gram	½ dr.	0·47	0·02	1·2	0·004	·007	0·196	7·2
Mutton, Eggs and Vegetables		9·36	5·11	40·58	0·065	·022	5·684	250·05
TOTAL		70·94	19·94	561·55	0·456	·771	17·703	2783·18
Mutton	6 oz.	31·52	22·66	—	0·25	·25	4·28	340·0
Eggs	2 oz.	7·55	7·55	—	0·028	·135	1·037	101·17
Potatoes	8 oz.	3·23	—	42·68	—	—	—	188·90
Country Vegetable mixed ...	36 oz.	23·22	5·58	241·38	0·405	1·17	34·470	1120·32
TOTAL		65·52	35·79	284·06	0·458	1·555	39·787	1750·39

From the food value given above it will be seen that the hospital diet which cures the condition in a week or ten days is a well-balanced diet.

DISCUSSION

Investigations of Eijkman (1897), Funk (1911), McCallum, Davis, Kennedy (1913-1916) and others have given a new orientation to our knowledge about dietetics. Following their work Goldberger and his associates (1926) proved experimentally that vitamin B_2 deficiency in young rats produced a symmetrical dermatitis, a condition analogous to human pellagra. When dogs were used in this experiment they developed a severe stomatitis called the "black tongue". In experimental animals vitamin A deficiency produces loss of weight, infections of mucous membrane, particularly of the respiratory tract, xerophthalmia, hemaralopia, retardation of the rate of regeneration of the visual purple of the eyes, stone in the bladder and kidneys and anæmia. The experimental studies of Mori (1922), Woolbach and Howe (1925) and others showed that the morbid process noticed in the epithelial structures consisted in their degradation to a lower type along with keratinisation and later hyperplasia. These changes were noticed in the conjunctiva, cornea and paraocular glands of the eye, in the respiratory, alimentary and genito-urinary tracts.

Wright (1931) observed that keratomalacia and xerophthalmia due to vitamin A deficiency were common in South India. Frazier and Hu (1931 & 1934) described follicular papules with a keratotic spinous process at the apex in addition to keratomalacia and xerophthalmia due to deficiency in vitamin A. They also observed that Pillat (1929) called attention to the generalised manifestation of deficiency due to vitamin A including involvement of the skin and the eye; that Bloch (1917) noticed a dry, shrivelled, scaly condition of the skin among infants affected with the nutritional ophthalmia; and that essentially identical cutaneous lesions were described in scurvy by Nicolau (1918-1919), Willshire (1919) and others. Nicholls in Ceylon (1933, 1934 & 1935) described "phrynoderma," a skin eruption and a sore mouth accompanied by keratomalacia, nerve symptoms and a decreased resistance to dysentery as a result of vitamin A deficiency. Loewenthal (1933, 1935) has also observed changes in the skin. He also mentions "itchy scrotum" as only a doubtful symptom of vitamin A deficiency described by Moore and Esquire (1928), and he himself has not seen it in any of his cases of proved vitamin A deficiency. The scrotal condition described by Esquire was attributed to monilia infection by Smith. Loewenthal (1935) enumerated the signs and symptoms under two headings, *viz.*, (1) the accepted signs and symptoms as xerophthalmia, keratomalacia, night blindness and phrynodermia, (2) doubtful signs and symptoms as neuritis, sore mouth and perléche, itchy scrotum, diarrhœa and dysentery, general infections, cutaneous sepsis and changes in the hair. Aykroyd and Rajagopal (1936) have also noticed similar skin conditions and came to the conclusions that "phrynoderma is unquestionably due to diet deficiency, but evidence has been obtained that vitamin A deficiency may not be the prime factor." It is also not uncommon in this place to see patients showing phrynoderma of Nicholls, angular stomatitis, angular conjunctivitis, keratomalacia and xerophthalmia. The skin condition by itself or in association with the mouth or eye affections is seen. Phrynoderma resembles closely keratosis pilaris and is often mistaken for it, but the difference lies in the nature of its distribution and the harshness of its spinous process. The keratosis pilaris is more thickly set, aggregated together in patches with rough spinous process but the individual elements are smaller. Phrynodermic lesions are discrete, less rough and less prominent but bigger.

Angular stomatitis with erosion of the lips and tongue was described by a number of observers. In Africa, Stannus (1930) observed stomatitis associated with disorders of the nervous system which was considered by him to be pellagrous in nature. Smith (1932) identified this kind of stomatitis with the perléche of the French authors as these two resembled each other. In India angular stomatitis was observed in children in famine areas by Aykroyd and Krishnan (1936). They (1936) also recorded the occurrence of "angular stomatitis, fissures at the labial angles, erosion of the mucous membrane of the tongue and in severe cases much of the anterior part of the buccal cavity", in school children of residential hostels in South India. They also considered that this condition was due to deficiency of one or more of the factors in the vitamin B_2 complex. Landor and Pallister (1935) have also observed

"eczema" of the scrotum, sore mouth and lesions of the central nervous system and considered these to be due to the deficiency of one of the B_2 group of vitamins. In this place also it is fairly common to see angular stomatitis and sore mouth not only in children but in adults also. They are seen in both males and females and among the latter more frequently during pregnancy when it is associated with symptoms of neuritis. Williams (1933) described a syndrome in children of the Gold Coast Colony characterised by diarrhœa, swelling of the hands and feet, mild degree of depigmentation of the skin, dry pale and sparse hairs, black patches over ankles, elbows and above the wrists and concluded that in the causation of this there was no evidence pointing to lack of vitamin A, C, D or E but it could not be concluded that there was no deficiency of some constituent of vitamin B complex.

From the above review of the literature, it will be seen that although angular stomatitis, soreness of the mouth, dry, harsh, keratinised skin patches, phrynoderma and itching of the scrotum have all been individually described by different observers in different parts of the world, none so far has recorded the occurrence of the symptom complex which we have described here as the "orogenital syndrome."

The question now arises, what is the ætiology of this syndrome?

1. Is it microbic in origin? No organism was found or isolated from the lesions which could be incriminated. Smith considered monilia as the cause of the "itchy scrotum" described by Moore and Esquire. While monilia was specially thought of, we have not seen it either in direct smears or in cultures. Further the adjacent areas and opposing surfaces are not invaded.

2. Is it possible that this syndrome is one of the multitudinous manifestations of syphilis the great imitator? This possibility also was considered. True, the mouth condition is liable to be mistaken easily for syphilitic stomatitis or glossitis, but such a scrotal condition or its association with the oral condition has not been noticed as a manifestation of syphilis. That syphilis plays no part in the causation of this syndrome is evident from the facts that only a small proportion of these cases gave positive blood Wassermann and these were not benefited by anti-syphilitic treatment.

3. Is it dietetic in origin and if so what is the nature of the error? There is overwhelming evidence in favour of this hypothesis. The condition improves very rapidly with a balanced diet. No chronic infection is known to respond to dietetic treatment alone and no other treatment has succeeded in this syndrome without improvement in the diet. The individual signs and symptoms exhibited by these patients have been considered by some observers as doubtful signs of vitamin A deficiency. But codliver oil, which is rich in vitamin A, does not by itself give a complete cure. Milk, when added to the usual diet, improved the mouth condition but its effect on the scrotum was not equally well marked. Parenteral liver therapy also did not show much effect and it is well known that liver is a great repository of vitamin A. It seems therefore vitamin A is not the main ætiological agent in this condition. Liver, milk, yeast, untreated and autoclaved, have all caused only slight improvement in the condition when administered for some time. So also the deficiency of some fraction of the vitamin B complex may at most only help in the development of this syndrome.

4. Could this be an early stage or mild or an abortive type of pellagra?

Stannus (1936 & 1937) has reviewed exhaustively in a series of articles in the *Tropical Diseases Bulletin*, all the available literature on pellagra and pellagra like conditions in warm climates and has observed that the disease is also met with in temperate and sub-tropical countries. He has also discussed the ætiology of pellagra and put forth the theory that " there may be a default of one or other or both intrinsic factor secreted by the pyloric gland organ and extrinsic factor in the food". The manifestations of pellagra are protean in nature. Pointed attention is drawn to this aspect by Stannus (1936) who considers "that pellagra is a disease which may show great variety in the picture which it represents. variety in the course which the disease takes, variety in the symptomatology and variety in the intensity of individual symptoms."

From the review of the literature by Stannus (1936-1937) it will be seen that almost all the observers have noted angular stomatitis, soreness of the mouth and tongue, fissures of the tongue with or without other gastro-intestinal symptoms as anorexia, diarrhœa or indigestion associated with

dermatitis or some change in some part of the skin. The parts of skin found to be commonly affected are the areas that have undergone certain changes as a result of traumata of various kinds as exposure to climatic conditions including solar radiation, friction, pressure, irritation, etc., *e.g.*, dorsum of hands and wrists, fore-arms, cheeks, nose and feet; areas liable to intertrigo as beneath the breasts and about the genitalia. It is also mentioned that associated with glossitis " there may be similar affections of the free margin of the prepuce, of the vulva and vagina, the margin of the anus and perineum". The actual involvement of the scrotum with other symptoms were only observed by a few investigators as Stannus, Mendelson, Lowe, Landor and Pallister and Fitzgerald Moore. Stannus (1930) observed in a total of 131 African prisoners the exanthem in 97 (74%) but the exanthem of the scrotum was found only in 19 prisoners (14·5%). Landor and Pallister (1935) described a condition characterised by "eczema" of the scrotum, "eczema" of the angles of the mouth and superficial glossitis, followed later by symptoms of combined degeneration of the spinal cord and poor vision. They examined 393 prisoners on 27th August, 1933, and found that 138 (35·1%) showed stomatitis and affection of the scrotum. Though the incidence of scrotal affection in this series is high, they thought that it was "quite possibly determined by the tinea infection". In our series none showed tinea infection either of the scrotum or of the genito-crural region. D. G. Fitzgerald Moore (1934) observed in school children in Nigeria "sore tongue and mouth with aphthous lips; a dry scaly, itching condition of the scrotum or vulval irritation supervened, followed later by dimness of vision and loss of central acuity". Lowe (1931) reported 40 cases of pellagra from the leprosy hospital Dichpali of which all showed affections of the skin, while 20 of these showed affection of the skin only. He also observed that the skin lesions "are seen on those areas most exposed to sun light, with the exception of the face which is usually little affected." So it will be seen that these observers also do not seem to have noticed genitals and the mouth alone affected together. Though the scrotum is not usually exposed to any kind of trauma it is an area liable to intertrigo. But the intertrigo is invariably seen on both the opposing surfaces and in the cases under review the inguino-scrotal angle which is commonly affected in intertrigo is singularly free from the exanthem though the scrotum is always affected. So this syndrome from the nature of the affection of the skin cannot be considered to be pellagrous as the area of the skin affected is not one exposed to any kind of trauma, though liable to intertrigo.

Pellagra is not considered to be a common disease in India. In recent years Lowe reported 40 cases in Dichpali in 1931, Raman 4 cases in Guntur in 1933 and Dinker Rao and Raman 8 cases in Vizagapatam in 1936. The writer also has come across a few cases in Vizagapatam. The orogenital syndrome is very common and almost every day at least a few cases can be picked out from the out-patients. The above three observers describe the skin condition as pigmented patches, the epidermis from which peels off readily leaving hypo-pigmented areas behind. But in this syndrome the scrotal skin does not show any increased pigmentation, the epidermis does not peel off very readily though it is imperceptibly shed during recovery and does not leave hypo-pigmented areas which later becomes pigmented. The section of the affected skin in pellagra according to Dinker Rao and Raman (1936) shows less pigment in the pigment bearing layer of the epidermis, hyperkeratinisation of the superficial layers, absence of glossy layer, atrophy of the papillæ, absence of sebaceous glands and degenerative changes in the hair roots. The histology of this syndrome as already described above does not show any loss of pigment nor atrophy of the papillæ and absence of sebaceous glands. Here the keratinisation is more marked and in addition there is cellular infiltration in chronic cases which is not seen in pellagra. Hence histologically also there is no similarity between these two conditions.

One of the most constant subjective symptoms in pellagra is "burning pain" and tingling and these according to Stannus are pathognomonic of pellagra. It is very important to note that these subjective sensory symptoms are absent in the cases under discussion. Hence the syndrome is not pellagrous.

Stannus thinks that the defect in pellagra is in the stomach. As Meulengracht (1935) considers that pernicious anæmia is the result of some defect in the secretion of the intrinsic factor of the pyloric gland organ, so Stannus in view of the resemblance of pellagra to pernicious anæmia puts forth the theory

that pellagra is the result of a defect in one or other or both factors, the intrinsic secreted by the stomach and the extrinsic derived from food, particularly food stuffs containing proteins of high biological value. Lombroso (1870) pointed out that hypochlorhydria occurred in a very large percentage of cases of pellagra and complete anacidity in the majority. Thus in pellagra there is digestive disturbance due to hypochlorhydria or achlorhydria. In none of the cases in this series was there any disturbance of digestion. On the other hand their digestion was good and they rapidly improved within a week with a balanced diet which they were able to relish, digest and absorb. In addition fractional test meal done in a few cases showed no change in the acidity of the stomach. On this account also the "orogenital syndrome" cannot be regarded as pellagrous.

The nervous and mental manifestations of pellagra are no less important than the dermal and gastro-intestinal symptoms. No nervous or mental symptoms were noticed in those affected with this syndrome.

Pellagra is considered to be a three system disease, namely the gastro-intestinal, integumentary and nervous system. It is not necessary to wait for the development of the triad of signs—dermatitis, diarrhœa, dementia to diagnose pellagra. The three systems presenting the three cardinal signs are affected as the disease progresses and further it will be noticed that all the systems may be affected in advanced cases. But in this syndrome even when it is of long duration the nervous and the gastro-intestinal systems were not seen to be involved even once though the mouth and genitalia were always affected. Further this syndrome is cured in about a week or ten days with a balanced diet, but cases of pellagra are never heard to have been cured in such an incredibly short time even if all the substances said to have a beneficial effect on the disease are given. It is well known that pellagra shows a seasonal variation but no such thing is noticed with respect to this disease. So looked at from any point of view the "orogenital syndrome" does not seem to be pellagrous in nature.

Attention has already been drawn to the fact that, when these patients are admitted in the hospital and given the hospital "ordinary Indian" diet which is well balanced with all the proximate principles of food in proper proportion and containing the accessory food factors and salts, it is surprising to see them recover completely within a short period of a week or ten days. From these it is not unreasonable to conclude that the "orogenital syndrome" is more a symptom complex of an ill-balanced diet than of hypo-vitaminosis.

Summary

A muco-cutaneous affection involving the mouth and the genitalia is described. It is a fairly common one but not recognised hitherto as a separate clinical entity. This symptom complex differs in many respects from the cutaneous manifestations of the other recognised deficiency diseases. A balanced diet rapidly cures the condition. No other line of treatment adopted had any appreciable effect. Hence an ill-balanced diet including deficiency in vitamins appears to be the most probable cause of the disease. From the sites primarily affected the name "orogenital syndrome" is suggested.

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PURULENT NASAL DISCHARGE, ITS CAUSES AND TREATMENT

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Purulent nasal discharge may come from one nostril or both. It may be intermittent or constant. Finally, it may only be present if the head is put in certain positions, so as to make the natural osteii of the para-nasal chambers lie at the lowest level of those chambers.

To understand fully the manner in which the nasal discharge forms and the way to treat it, one has to remember the surgical anatomy of the nose and the para-nasal sinuses. Anteriorly, there is the vestibule of the nose where occasionally a boil forms giving rise to the condition known as furunculosis of the nasal vestibule. This when ripe discharges pus.

Behind the vestibule is the nasal septum and the turbinates which are involved in inherited syphilis. This gives rise to offensive purulent discharge, which, if stagnated, dries into crusts.

In the mucous membrane of the nose one occassionally finds, amongst those, who are exposed to contact with horses, nodules in the nasal mucosa, which break down into ulcers of the septum, turbinates or even of the para-nasal sinuses. It is from the breaking down of this process in glanders, that we get purulent discharge.

This brings to mind another bacterial disease, namely, diphtheria of the nose. This is present in infants and is often mistaken for congenital syphilis, for these cases do not show intoxication. In such cases, unless the membrane is detected, one has to rely for the diagnosis on the microscope to show the diphtheria bacillus.

In some of the cases one finds the nostrils unduly wide yet causing nasal obstruction and purulent and very offensive discharge. These cases are known as ozæna which forms seventy per cent. of the cases of atrophic rhinitis. Here the discharge is not only purulent but forms green crusts which when renewed leave the bleeding surfaces behind. It is a disease common in the fair sex in which the victim is shunned by her own relations.

Now a trauma whether direct by a blow on the nose or surgical may produce a hæmatoma of the septum, which, if septic, gives rise to the abscess of the septum. This while bursting pours out the purulent discharge.

Foreign bodies with hard pieces, etc., if left long enough in a nostril will produce purulent discharge and if ulceration sets in the discharge will be tinged with blood. Parasites such as maggots produce symptoms akin to foreign bodies, but there is more purulent discharge.

Now we come to a set of diseases which give rise at certain stages to the purulent discharge. These are grouped under the term para-nasal sinus suppuration.

On the lateral wall of the nose will be noticed three turbinates, the superior, the middle and the inferior. Below these turbinates lie the three meatus called the superior, the middle, and the inferior. In the upper two often lie the openings of the para-nasal sinuses, while in the lowest meatus open the naso-lacrimal duct. Thus the middle meatus drain the anterior group of the para-nasal sinuses, *viz.*, the frontal, the anterior ethmoidal and the maxillary (antrum of Highmore). In the superior meatus open the posterior ethmoidal cells and the sphenoidal air sinus. So the suppuration of these sinuses will at certain stages give rise to purulent discharge which will lie in the first place near the natural opening of the sinus in the corresponding meatus, after which, if it is of the anterior group, it will trickle out at the anterior nares and if of the posterior group will go to the nasopharynx and thence to the back of the throat.

Finally, in the naso-pharynx we get a locally malignant tumour, called the naso-pharyngeal endothelioma. This as it grows begins to give rise to purulent discharge simply from stagnation of the secretions produced in the nostril.

To sum up the causes of purulent nasal discharge we may classify thus:—

(1) Maxillary sinus suppuration, (2) Frontal sinus suppuration, (3) Ethmoiditis, (4) Sphenoidal sinus suppuration, (5) Naso-pharyngeal endothelioma, (6) Furunculosis of the vestibule, (7) Inherited syphilis, (8) Glanders, (9) Diphtheria, (10) Atrophic rhinitis, (11) Abscess of the septum and (12) Foreign bodies and maggots.

Maxillary Sinus Suppuration

In this condition it is advisable to remove the offending cause, especially if a carious tooth is found, it must be extracted. But if it is due to influenza it is wise to combine medical with local treatment. The injections of such drugs as S. U. P. 36. Prontosil or Soluseptisine, and the use of alkaline nasal washes are often effective. The following will form a useful nasal wash.

℞

Sodi bicarb—ʒi

Sodi chloride—ʒi

Borax—ʒi

Ft. Pulv. Sig: Take a teaspoonful of this powder in a pint of warm water to make a nasal douche. To be used night and morning.

When not relieved by this method the antrum is washed after puncturing with Tilley's trocar and canula with this solution with the addition in it of a teaspoonful of hydrogen peroxide. This process, as a rule, requires repeating daily for about four days. In grown ups, two per cent. percaine with equal parts of adrenalin is required as a local surface anæsthesia in the inferior meatus of the nose before puncturing its lateral wall. Now the question arises why this bony wall is selected, when the nasal fontanelle is the membranous part of the lateral wall of the nose in its middle meatus. The answer is simple that except in infants the inferior meatus is nearer the floor of the nose and so will favour drainage. Then again if one goes through the middle meatus he may find himself in the orbit or under the cheek in a few cases, resulting in orbital cellulitis or surgical emphysema respectively.

If the case be more chronic it will be wise to do a conservative maxillary antrum operation. In this the anterior third of the inferior turbinate is removed by cold wire snare method under surface percaine anæsthesia. The antrum is then reached with Tilley's harpoon followed by burr. The opening should be about two inches wide, so that it may take no less than three months to close. Then it should be washed out with alkaline lotion as before.

If the case is very bad a radical operation is done on the antrum as done by Caldell Lue. The principle

of the operation is as follows: the infraorbital nerve is blocked with one per cent. novocaine, an incision is made under the upper lip on the corresponding side and the cheek is reflected on the canine fossa and the antrum is cleaned and a counter opening is made in the nostril in its inferior meatus, through which a gauze drain is brought out. The antrum is daily washed with alkaline lotion.

Frontal Sinus Suppuration

Medical treatment is the same as in the previous condition. It should be washed with alkaline lotion by removing the anterior end of the middle turbinate and after breaking the first group of the anterior ethmoid cells if necessary and passing the frontal canula.

When this measure of intra-nasal surgery fails, Howarth's extra nasal operation is done. In this the pulley of the superior oblique is separated, the eye is pushed outwards, the floor of the nose is broken and a drainage is made through the nose. The patient should be informed that he will suffer from double vision till the new pulley of the superior oblique is formed, which takes about two months. By performing this operation the forehead is not disfigured and the risks of dreadful osteomyelitis are avoided.

Ethmoiditis

In this the suppuration may be such that it may pull out of the ethmoid cells, or go from anterior cell group to the posterior one. We have at times noticed that ethmoid pus comes on certain days and then the cells get blocked with crusts, and after a time this crust gives way and the pus comes again. This type of ethmoiditis is called "Weeping Ethmoid".

Now besides the ordinary treatment mentioned under maxillary sinus suppuration one has to remove the hypertrophies which are called the nasal polypi. This should be anæsthetised in the middle meatus, at its origin by one per cent. percaine solution, and then removed by cold wire snare with a jerk. If multiple, they should be removed till there is bleeding and so you cannot remove any more under direct vision. Second sitting should be done at the end of the week, when the reactionary œdema has subsided. Now if purulent discharge persists after this intra-nasal Haje's operation in four stages becomes a necessity, the principle being to remove the ethmoid cells group by group by Haje's hooks and curettes. The important precaution to avoid danger, should be taken, and this is to work always external to the attachment of the middle turbinate under direct vision and under perfect ischæmia. In rare cases if this fails, external ethmoid operation of Kish should be performed by a small incision, internal to the inner canthus.

Sphenoidal Sinus Suppuration

Besides the ordinary medical treatment mentioned above, menthol inhalation may be tried with benefit.

℞

Menthol—grs. 9
Spt. Rectified—ad ʒi

Mft. solution.

Note—Take 20 to 30 drops of this solution in a pint of steaming hot water and inhale for ten minutes at bed time.

Endrine nasal compound and glucofedrin may be tried with a nebulizer.

Failing this the sinus is washed out with a catheter and when that fails a greater part of the anterior wall of the sphenoid is removed by means of Haje's operation or some modification thereof.

Naso-pharyngeal Endothelioma

Arsenic and calcium may be given internally. Locally 3 to 5 minims of mono or trichloracetic acid may be injected to shrink the growth. These may be repeated once in 12 to 14 days.

I find that these cases invariably prove fatal from hæmorrhage, as these are only blood spaces in the naso-pharynx and not the proper vessels. If patient survives the age of 25 spontaneous evolution takes place.

Furunculosis of the Vestibule

If ripe it should be incised. A course of collosal manganese 1 c.c. every day for six days may be tried. Locally after the pus has ceased the following ointment is to be applied.

℞

Hydrarg ppt. alba—grs. 1½
Zinc Oxide—grs. 1½

Lanoline—ʒii
Vaseline Alba—ʒii

Ointment to be applied to the hairy part of the nose.

Inherited Syphilis

Besides the general treatment by mercury, iodides, etc., local treatment of cleansing the nose, as is discussed under atrophic rhinitis is advocated. But if sequestra be detected, and if separated they should be removed.

Glanders

Besides keeping the nose clean, mercury by mouth and vaccines may be given.

Diphtheria

We do not advocate any local nasal treatment, but it is wise to gargle with alkaline lotion to reduce the chances for mouth infection. But diphtheria antitoxin treatment should be continued.

Atrophic Rhinitis

It is a disease which one is not able to cure, yet reasonable relief may be expected if both local and general treatment are carried out over a prolonged period.

The local treatment consists of washing the nose with alkaline nasal wash, in which lysol, sanitas or atomidine may be added twice a day. At bed time to change the media in the nose detrimental to bacteria give twenty-five per cent. glucose in glycerine locally.

Endocrine product such as thyroid, and arsenic, calcium, etc., may be tried.

Vaccines especially made from B. Prez. may be given. This does give relief so long as the patient is under treatment.

Nascent iodine may be tried. Pot. Iodide internally and hydrogen peroxide plug in the nose may also be tried.

$$2KI + H_2O_2 = 2KOH + 2I.$$

Finally, at present I am trying with Paratyl "A" during the first week and Paratyl "B" during the next three months. But a sufficient number of cases have not been tried, so as to give a definite opinion on the subject.

Many operations have been performed to make the nostrils smaller by fat or cartilage graft or to displace the deviated nasal septi or lateral nasal wall displaced medially. Finally, parotid gland duct has been opened in the antrum. But all these operations have failed to relieve the condition.

Ultraviolet rays were tried and found wanting.

Abscess of the Septum

This must be opened and drained by Hilton's method.

Foreign Bodies

These should be removed under general anæsthesia in children for they hardly take a minute to do so. But if one tries to remove without general anæsthesia, children do not co-operate as a rule. After removal the nasal cavities should be washed with an antiseptic.

Maggots

These should be killed by chloroform, which may be syringed with equal part of water into the nostril. If chloroform is not available liquid paraffin or olive oil may be sprayed into the nose. These oily substances destroy the respiratory organs of the maggots. Afterwards to keep the cavity clean insufflation of iodoform with equal part of boric acid is done.

A FEW OBSERVATIONS ON THE MANAGEMENT OF MALPRESENTATION

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In this paper I have put a few observations on the management of malpresentations met with in our obstetrical practice, Some of the statements that follow may not even possess the merit of provoking thoughts but are or may be unfortunately dogmatic and assertive.

The most common of all malpresentations is the incompletely flexed occipito-posterior, where the occipito-frontal diameter ($4\frac{1}{2}$" to $4\frac{1}{4}$") is the presenting diameter instead of the sub-occipito bregmatic. When a case is diagnosed as occipito-posterior in the last month of pregnancy the following should be considered, *viz.*:—

1. Is she a primigravida or a multigravida?
2. Is she an elderly primigravida or is she one with a minor degree of pelvic contraction or both?
3. If she is a multigravida whether she is in the best of health and what sort of obstetrical history she possesses?

An elderly primigravida with or without a minor degree of pelvic contraction but with an occipito-posterior incompletely flexed is, I submit, a good case for cæsarean section from all points of view.

It is known to all what a difficult problem it is to judge beforehand how an occipito-posterior will behave when labour actually begins. Under the usual conditions it is well to advise the pregnant woman with an occipito-posterior, whether completely flexed or not, when she places herself under your treatment, to lie on the opposite side during the last weeks of pregnancy. One will be gratified to find that in some cases the occipito-posterior becomes occipito-anterior without any further effort on one's part. The use of Buist pads and the serious attempts at manual rotation have been given up after disappointing results. One more than suspects an occipito-posterior as incompletely flexed when with the third grip he feels a wider diameter of the head which is relatively at a higher level in relation to the pelvic brim. If the os is 2/5 dilated the anterior fontanelle will be easily felt. If there is not much or any resistance at the pelvic brim and if the uterus acts with vigour then an incompletely flexed occipito-posterior may become completely flexed and the occiput becoming the leading part will rotate forwards. The tone of the uterus in the last month of pregnancy in multiparous women should be increased by the administration of calcium gluconate and Liqr. Sedans. If the pain happens to be weak, a soap water enema followed by hot douches should be ordered. The uterine pain becomes stronger. If pains are still weak it is well to administer $\frac{1}{4}$ gr. of morphine with atropine, supplemented by stimulants, *i.e.*, calcium, glucose and hot coffee when she wakes up. If the os is 3/5th dilated and if the pains are still weak, the membranes may be ruptured. About a pint of liquor amnii may be allowed to escape. The fœtal axis is brought into play, the uterus now acting on the breech and the head advances quickly.

After the rupture of the membranes, the cervix is stretched from 3/5th to 4/5th where pains are weak. The forehead should be pushed up during the pain and the fundus should be pushed down. If the os is fully or nearly dilated, manual rotation should be tried, with a view to bring the occiput forwards. If successful it will be better to leave her alone, as she will deliver herself. Whereas, if immediate delivery either for the sake of the child or the mother is necessary, forceps should be applied and the child delivered.

If, however, the head is comparatively high, internal podalic version can be done as an alternative to forceps. In cases where the child is alive, where the head is low down and uterus tonically contracted, where manual rotation has failed and internal podalic version is out of question for some reason or other, forceps should be applied and delivery effected by slow and steady traction. This situation requires

some experience on the part of the operator. Of course, certain amount of force would be necessary and a judicious traction is all that is required. If the child is dead and uterus tonically contracted, craniotomy is indicated.

In cases of persistent occipito-posterior if the condition of the mother and the child is good and if the head is advancing well with the pains a few whiffs of chloroform may be given to relieve the pain and the child delivered. In such cases, where the head is advancing well with pains, forceps need not be applied, as there is danger of perineal tear in these cases, especially in primigravidæ, where a median episiotomy will be better. In cases of persistent occipito-posterior, when the child is dead and even if the uterus is not tonically contracted, craniotomy is the best procedure.

Breech Presentation

It is technically a malpresentation but complete breech cases do not give rise to any trouble at all in normal parous women at any rate. Many people bother in breech cases. In breech cases in primi, after 28 weeks, cephalic version should be tried except in women with flat pelvis or in cases of placenta prævia. Some may not like to change it into cephalic but it is thought to be more easily performed then. If it changes position, it may be tried a week later. After 36 weeks, it may not be possible to perform cephalic version easily.

A word or two about extended breech will not be out of place. Sometimes the diagnosis is rather difficult. In extended breech, the limbs may be felt on either side of the trunk as if splints are applied and cephalic version is usually not successful. The uterus occupies a higher level in full term and the hard breech may be mistaken for the head. It is better if an x-ray is taken for confirming the doubt because extended breech is a serious condition in breech presentation. Extended breech diagnosed in an elderly primipara even with normal pelvic measurements will be a good case for cæsarean section; otherwise when the os is fully dilated, classical treatment may usually be done.

Impacted Breech

If the breech is highly impacted, *i.e.*, near the brim of the pelvis, it should be disimpacted under ¼ gr. of morphia and chloroform, *i.e.*, it should be converted into extended breech and the treatment proper to extended breech carried out. When the breech is fairly low down and if there is danger to the mother or child, groin traction by index finger in both the groins aided by fundal pressure by a competent assistant will facilitate delivery. I am not for using a breech hook and I have seen some of the horrible effects as a result of the change of hook point. In cases where one cannot deliver by groin traction, various other methods have been suggested, *viz.*, the application of forceps, hooks, cephalotribes or cranioclast. I would be the last to employ them. Many people bungle when the head comes out. If it does not come, then somebody must be asked to push from above with the greatest caution as intracranial hæmorrhages result from mistakes on the part of the operator. The after-coming head should be delivered slowly and it is the haste and force with which the head is extracted that contributes more to fœtal mortality due to cerebral injuries.

Transverse Presentations

There are many causes for transverse presentations and treatment would depend upon the causes. In all such cases of malpresentations, it should be considered whether cæsarean section would be necessary. I am, of course, not for cæsarean section as it should be done only where the condition of the patient would permit the operation and where it should be the best possible treatment under the circumstances. During the last month of pregnancy, cephalic version will be quite alright as especially in a multi, cephalic version is indicated early in labour. If os is 2 fingers dilated, bipolar version should be tried. The membranes should be punctured and about half a pint of liquor amnii let out, the head pushed down and a tight pad and binder applied. If the os is fully dilated or dilatable, internal podalic version is indicated, where the uterus is relaxed or can be made to relax. Whereas, if the child is dead and the uterus tonically contracted, it points to decapitation and nothing else. If arm not prolapsed and uterus tonically contracted, spondylotomy and evisceration may be done according to circumstances.

Face Presentations

Practically the diagnosis is made after the onset of labour by vaginal examination. Various menœuvres

have been suggested for the correction of face presentations, *i.e.*, Schatz, Baudelocque manœuvres, and I find all of them useless. Though face presentation is called a malpresentation, it rarely gives trouble and the woman delivers by herself. Very rarely, forceps have to be applied. When the head is well jammed, in the cavity, and when the uterus is tonically contracted, craniotomy must be done. 99% of the face presentations deliver easily, 90% at least with natural powers and 9% with forceps. There may be one or two cases where version would be useful. That is only when os is fully dilated and the head is at the brim. But there is trouble in such a measure and sometimes the head and arms are extended. In cases where chin cannot be rotated from its posterior position manually, axis traction forceps should be applied and steady traction made before taking to perforation. Some rotate with the forceps. If the chin remains persistently posterior and fails to rotate with forceps, perforation is indicated.

Brow Presentations

It is seldom met and is the rarest of all malpresentations. I have in my practice met with only a few cases of brow presentations. I usually convert it into a face presentation. As for the diagnosis my remarks for face presentation holds good. If correction by natural power fails, if the os is fully dilated, head above the brim and the woman is multigravida, with good obstetrical history, internal podalic version is indicated. Most people convert it either into a face or a vertex presentation. Maximum time to act must be given, until maternal and fœtal conditions indicate any interference. Whereas, if the child is dead, craniotomy is the thing to be done.

I want to make one more observation about the cæsarean section for these cases. Ordinary classical cæsarean can be done and the results are very satisfactory. It is very easy and no special skill is required.

A NEW METHOD OF TREATMENT OF TYPHOID FEVER

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It has been the concensus of opinion among medical practitioners to treat typhoid cases symptomatically and to leave them more or less to nature and to their fate. Treatment of typhoid fever is a burning question of the day, as there is no specific therapy of this disease, which, unlike in the continent, occurs in an epidemic form in this country. Many items have been tried including typhoid phylacogen and oral typhoid phage, foreign as well as locally manufactured, but these produce practically no results whatsoever. Having been unable to give any relief to the innumerable patients suffering from toxic manifestations of typhoid fever, I was in search of some specific therapy for trial, when Dr. B. B. Sen's paper " On the possibility of treating typhoid fever by Veno-typhoid-phage "[1] came to my notice and I decided to give this item a thorough clinical trial in my hospital.

Intravenous bacteriophage therapy has been strongly advocated by renowned workers in the line and at the same time, it has been discredited by others of no inferior merit, who definitely claim that phage is absorbed by blood or tissue fluid and as such, can have no action on the circulating micro-organisms. I have no concern with innumerable different theories as to the nature of the bacteriophage or whether the action of bacteriophage depends on the direct lytic action on the infecting microbes or whether it is due to the production of increased leucocytosis and phagocytosis. But I am concerned only with giving relief to the patients suffering for a protracted period from high fever often with delirium and generally with tympanitis, and this relief I have been able to give, with Veno-typhoid-phage.

I had the opportunity of collaboration with Dr. B. B. Sen, who followed the idea of MacNeal and Frisbee[2] with certain amount of modification. To start with I decided to take up one or two cases and inject a very small fraction of the Veno-typhoid-phage and see the result first.

Case No. 1. Dilkumari, H. F. 30, admitted on 29-11-37 with a history of fever for the last 12 days and amenorrhœa for the last three months. Lungs revealed moist crepitant rales on the right side. Clinically it was diagnosed as typhoid and confirmed by serological examination. Five injections of typhoid phylacogen were given on alternate days without any result. The temperature was maintained between 100°F. and 101°F. Veno-typhoid-phage 1/5th c.c. was injected intravenously and there was a sharp rise of temperature up to 105°F. with shivering and rigor, but the temperature came down to 98°F. and continued to remain so for 2 days. Another dose of 1/3rd c.c. (*i.e.*, almost double) was injected and there was a sharp rise but this time up to 102°F., then the temperature came down to normal and continued to remain so. The patient was then watched for seven days in the hospital and then discharged as cured.

Case No. 2. Sk. Mazid, M. Ch. 5, admitted on 10-12-37 with a history of fever for the last ten days. Clinically it was a case of enteric fever and Widal reaction was found to be strongly positive to Para B. in 1 in 100 dilution. The temperature was varying between 100°F. and 103°F., and typhoid phylacogen was tried in this case also without any result. Veno-typhoid-phage 1/10th c.c. was injected intravenously (the patient being a child) when the reactionary rise was up to 105°F. with rigor and shivering, but the temperature came down to 98·4°F. and subsequently it did not rise again. The patient was watched for a few days and as there was no more rise in temperature the intravenous phage was not repeated. The patient was discharged as cured. The temperature chart of this case has been shown.

Emboldened by the results of these two cases I decided to follow the subsequent cases by injecting intravenously dose No. 1 in the morning and dose No. 2 in the evening of the first day of treatment,

after a definite diagnosis is arrived at. We used to watch the temperature of the patient every 15 minutes after each injection of Veno-typhoid-phage, up to one hour, as it was always observed that the reactionary rise of temperature takes place, if at all, within 45 minutes to one hour. The next day dose No. 3 was injected in the morning and dose No. 4 in the evening and on the third day dose No. 5 was injected in the morning and dose No. 6 in the evening. In this way we wanted to find out the dose that creates a reaction. The first dose of the Veno-typhoid-phage generally produced no reaction, but in a few already protracted cases, mostly in the third week, (like the two cases already reported) the very first dose used to produce reactionary rise of temperature. In general we used to get the reaction with the second or third dose and in some cases with the fourth or even the fifth dose. Seldom had we to push the sixth dose for the purpose. The reaction is a typical picture of malarial fever, with shivering, chattering of the teeth attended with rise of temperature even up to 106°F., feeling of heat and then a sharp fall of temperature and intense perspiration. In the first few cases Dr. Sen and myself used to stand by the side of the patient and in the first two cases we thought it desirable to inject adrenalin and cardiazol, but subsequently the nurses got accustomed to the reactionary phase as we explained to them and the patient alike that we wanted to create this condition in the interest of the patient. As soon as the reactionary dose was obtained we waited for 24 hours to give rest to the patient and then one-fourth of the remaining doses were injected morning and evening.

We have tried 15 cases in this way (the first two cases are not included in the series) with definite improvement of the toxic symptoms and shortening of the course of the disease. We used to keep ice-bag ready which was put on the occiput as soon as the temperature went above 102°F. Tepid sponging was carried on and invariably the reactionary temperature passed off within 15 to 30 minutes. After the reaction is over, the patients generally feel very comfortable, tympanitis is relieved and delirium disappears, if not by a single dose, two doses were generally sufficient to clear off nervous manifestations in all our cases.

All these cases were diagnosed by Widal reaction, 9 being positive to typhoid; 4 to para-typhoid A and 2 to para-typhoid B in a dilution varying between 1 in 100 and 1 in 250. 3 cases belonged to the second week and 12 cases to the third week as generally I have to admit patients after 7 to 10 days' illness at home. Altogether 10 were attended with delirium, subsultus tendinum, and other toxic manifestations, with tympanitis, and 5 were attended with tympanitis alone. In one of our series there was intestinal hæmorrhage after the second dose. In this case we stopped Veno-typhoid-phage for the time being and injected Cebion (Forte) for stopping the hæmorrhage. After the hæmorrhage was stopped with two injections we began the course again and completed it without any further complications. In four of our series we found that a secondary rise of temperature took place. This was explained to be due to a secondary septicæmia by the organisms which had taken shelter in the spleen and other internal organs. We pushed forward two to four more injections in doses of one-fourth of the sixth dose.

The reactionary rise of temperature after the injection of Veno-typhoid-phage is explained as being due to the action of the endotoxin or the toxic end-products elaborated by the dissolution of a large number of bacteria present in blood and on this basis it was thought that it might be possible to check the high reactionary rise of temperature, which caused so much nervousness on the part of the attendents, by the injection of concentrated anti-endotoxic serum 2 hours before the phage which would neutralise the toxic endproducts to a certain extent. So we tried the next fifteen cases with Veno-typhoid-phage combined with concentrated anti-typhoid serum (U. D.)

First day Morning:—10 c.c. conc. anti-typhoid serum subcutaneously and 2 hours later, Veno-typhoid-phage No. 1 intravenously.

First day Evening:—Veno-typhoid-phage No. 2 intravenously.

Second day Morning:—10 c.c. conc. anti-typhoid serum subcutaneously, and 2 hours later, Veno-typhoid-phage No. 3 intravenously.

Second day Evening:—Veno-typhoid-phage No. 4 intravenously.

Third day Morning:—10 c.c. conc. anti-typhoid serum subcutaneously, and 2 hours later, Veno-typhoid-phage No. 5 intravenously.

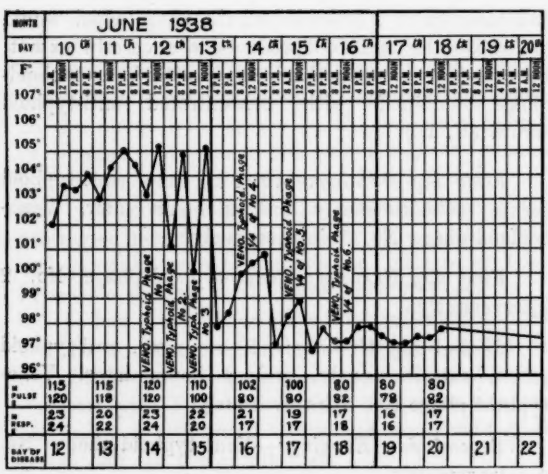
Third day Evening:—Veno-typhoid-phage No. 6 intravenously.

It is really surprising to note that there was no shivering or chattering of the teeth in these cases and the reactionary rise of temperature was never more than 104°F., which is not at all depressing to the attending physician or the nurse. 30 c.c. of the Serum (U. D.) given 10 c.c. per day on three successive days cannot be considered as a curative dose of serum, as even Felix himself advocates 100 c.c. at least, of his concentrated serum, for a curative dose. The Veno-typhoid-phage treatment has always been supplemented by oral typhoid phage (U. D.) or entero-phage (U. D.) in late cases, in the way of local treatment.

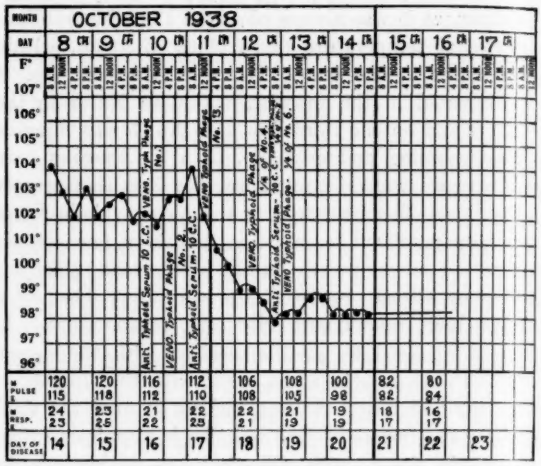
We have also found that in uncomplicated cases only, the fall of temperature after the reactionary rise was subnormal (97°F.), but in cases associated with bronchitis or other complications, the fall is not so sharp, and in such cases the temperature is generally maintained at a level of 100°F., till the complications are relieved.

Temperature charts of 2 cases, one case with Veno-typhoid-phage alone and the other with concentrated anti-typhoid serum (U. D.) combined with Veno-typhoid-phage are shown.

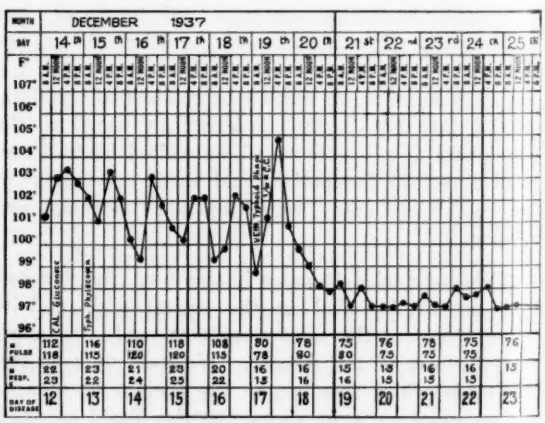
Patient's Name—Fulkumari Ward & No. of Bed—
Age—7 years Disease—Typhoid
Date of admission—10-6-38.



Patient's Name—Nando Kaibarta Ward & No. of Bed—
Age—25 years Disease—Typhoid
Date of admission—8-10-38.



Patient's Name—Sk. Mazid Ward & No. of Bed—
Age—5 years Disease—Paratyphoid
Date of admission—14-12-37.



Before injecting the phage intravenously, dose No. 1 was sent to the Professor of Physiology, Presidency College, for the estimation of non-protein and total nitrogen, and the result showed 0·0581 mgm. of non-protein nitrogen and 0·0616 mgm. of total nitrogen.

I have often thought that the effect of the Veno-typhoid-phage may be due to the foreign proteins present in the phage as products of lysis of organisms, and not necessarily to the action of the phage itself. To throw light on this question some Veno-typhoid-phage ampoules after being treated to a temperature of 75°C. for one hour, which killed the phage corpuscles but kept other products in tact were given to me for trial. I took the next seven cases for trial by this treated phage, but these cases showed practically no reactions even with 2 c.c. doses and there was no beneficial effect on the course of the disease or on the toxic manifestations of the patients.

Only two cases were then taken up for injection of very small doses of T. A. B. vaccine intravenously. There was no effect on the course of the disease or on the toxæmic condition of the patients, though in these cases also there was a sharp rise of temperature up to 105°F. and 106°F. I had a mind to try intravenous vaccine in a few more cases but finding in the literature that some of the workers have got "profuse liquid diarrhœa in cases in which constipation had previously been present",[3] I was scared away.

This proves beyond all shades of doubt that the remarkable effect obtained by the intravenous administration of this specially prepared phage is due to the action of the phage itself on the infecting circulating microbes, and not due to the action of the lysed bacterial products, nor due to (bacterial) foreign proteins present in the phage ampoule—but I prefer not to go further into controversy as to the mode of action of the phage administered intravenously as it is not truly within my province.

I am sure this is a very remarkable achievement and this combined method can be safely introduced in private practice as I have already done with uniformly successful results.

My thanks are due to Dr. B. B. Sen, M.Sc., M.B., Director, Serum Institute of India (Biological Laboratory: Union Drug Co. Ltd.), Prof. N. M. Basu, M.Sc., Professor of Physiology, Presidency College, Calcutta, Dr. Miss G. B. De, L.M.F., Dr. N. Mittra, M.B., Miss Seneka Prodhan (matron) and the nurses of the North Suburban Hospital for helping me in different ways in the conduction of these cases. Thanks are also due to the Calcutta Clinical Research Association for kindly undertaking the serological and bacteriological tests of all these patients.

Summary

1. Two cases of typhoid fever were first treated with one or two doses of Veno-typhoid-phage with promising results.

2. Fifteen cases of typhoid fever were treated with the regular course of the Veno-typhoid-phage with definitely good results, but with very high reactionary rise of temperature.

3. The next fifteen cases of typhoid fever were treated with concentrated anti-typhoid serum (U. D.) combined with Veno-typhoid-phage, with very good results without any alarming reactions.

4. Seven cases of typhoid fever were treated with the same dosings of *inactivated* phage without any beneficial results.

5. Two cases of typhoid fever were treated with small doses of intravenous T. A. B. vaccine with very high reactionary temperature but without much improvement.

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THE INDIAN MEDICAL COUNCIL: A RETROSPECT

In the November issue of the Journal last year, we went elaborately into the question of the composition of the Indian Medical Council from which it might be recalled that although on the surface the majority of the official element does not appear so great, a closer analysis would show that so long as the present constitution of the Council lasts, the official view is likely to predominate because many of the elected members belong to the Government service and it is but a common human failing if they refuse to vote against their chief of the Medical Department who sits before them in the chair. That the Director-General of the Medical Services in India should also continue to be the head of the Indian Medical Council is a great anomaly and constitutes one of the major defects of the present Council which should be remedied at as early a date as we have suggested in our last issue on the subject. Having once appreciated this position, it is not difficult to understand the rationale of the working of the council during the first term of its existence.

The first thing which the Council had to determine was the question of appointment of its Inspectors. It would be recalled that in spite of strong protests from the independent section of the profession the Governor-General in Council had appointed, on the recommendation of the President of the G. M. C. of Great Britain, a European as the first secretary of the Medical Council on a salary of Rs. 3,000/- a month. Again, contrary to any precedent even of the G. M. C., this secretary was intended to be appointed one of the Council's Inspectors also. The Indian Medical Council, at their first meeting held on 9th March, 1934, laid down the wholesome principle that the offices of the Secretary and the Inspector should not be combined; but, strange as it may appear, they reversed their own decision and that too within a period of three months when the pressure of the whole official block was brought to bear on them on this very question in June, 1934.

The next thing which the Council did was the establishment of a uniform minimum standard of education for the medical faculties of the universities all over India. We are glad to note that although the curriculum laid down by the Council is practically the same as that laid down by the G. M. C. the universities have all agreed to follow the curriculum. Thus a sort of uniformity with regard to higher medical qualification may now be definitely said to have been achieved in the country. The Council has also completed inspection of all the universities in India and has noted that most of the universities have satisfactorily followed the curriculum laid down for them.

Let us now examine the next object with which the Indian Medical Council was brought into existence, *viz.*, the establishment of schemes of reciprocity with other countries for mutual recognition of their medical degrees. This the Indian Medical Council has established with universities in Great Britain. The G. M. C. has accorded recognition to the qualifications granted by all the Indian universities which have been recognised by the I. M. C. This recognition has been given with retrospective effect from the year 1930, although, in the case of Calcutta University alone, this has not been done. This step-motherly conduct of the G. M. C. came in for severe criticism and in August, 1937, a resolution sponsored by Dr. K. S. Ray was unanimously passed condemning the action of the G. M. C. and requesting them to reconsider their decision. At the next meeting the reply of the G. M. C. refusing to reconsider their decision with regard to recognition of the Calcutta University degrees with retrospective effect from 1930, was discussed at length and three resolutions were moved by Capt. P. B. Mukerji, as a retaliatory measure. These resolutions along with the whole question of correspondence with the G. M. C. on the subject of the recognition of Calcutta University degrees, were referred back to the Executive Committee for further consideration. Certain legal aspects have been raised and we understand that the Indian Medical Council, beyond requesting the G. M. C. of Great Britain, has got no power to take any retaliatory measure although the same was granted to the Council under sections 13 and 14 of the Indian Medical Council Act. We have referred at great length in our November issue to the invalidation of these powers as a result of the Government of India Act of 1935 of which sections 119, 120 and 121 practically make the Indian Medical Council powerless to refuse recognition to British degrees. We are glad, however, that the Indian Medical Council have at its last meeting held at Delhi on the 24th of October, 1938, recommended to the Government of India to amend the Indian Medical Council Act in such a way that powers of refusing recognition to degrees granted by licensing bodies in the United Kingdom on grounds of insufficiency of standards may be given to it.

This is so far with regard to reciprocal recognition with the United Kingdom. With regard to recognition of Indian Medical degrees in countries outside the British Isles, although the Indian Medical Council have secured this recognition on a reciprocal basis, the manner in which this has been done, is, on our opinion, hardly consistent with the dignity and self-respect of India and her premier Medical Council. The universities with which reciprocity has been established are the following: 1. Adelaide (South Australia); 2. Dalhousie (Nova Scotia); 3 and 4. Cape Town and Witwatersrand (South Africa); 5. Malta; 6. Ceylon; 7. Hongkong; 8. Straits Settlements. All these licensing bodies refused to enter into direct reciprocity with the Indian Medical Council. They maintained that they would recognise Indian degrees only when these were recognised by the G. M. C. of the United Kingdom. The innocuous efforts of some members of the Indian Medical Association who are also members of the Council to refer the matter back for a proper scrutiny of the curriculum of these foreign universities and licensing bodies were defeated by an overwhelming majority. The decision of the Council compromising India's prestige and honour in the eyes of those countries which had refused most unceremoniously to deal with her on terms of direct reciprocity, has reduced its own status from the high, independent and autonomous body predicted by the late Sir Fazli Husain and his colleagues to ensure "efficiency at home and honour abroad", to that of an insignificant council which did not consider it dishonourable to stand with a beggar's bowl in hand at the door-steps of miniature countries like, Ceylon, Hongkong, Straits Settlements, etc., for securing recognition by them of Indian Medical degrees on such humiliating terms. This decision was rendered possible by the presence at the meeting of a large number of nominated members and several weak-kneed elected representatives who succumbed to the official whip of nodding their assent to whatever was desired by the authorities. The triumph of the G. M. C. in forcing their will on the Indian Medical Council and converting the latter practically into a subservient body was thus complete. This humiliation of India's honour and dignity accepted by her own Medical Council remains yet to be retrieved and it is very much to be hoped that the members of the new Council would carry on an incessant fight inside the Council against this monstrous wrong and injustice perpetrated by their predecessors. We recognise in this connection that the absence of an All-India Register deprived the Coun-

cil of the most effective means by which it could enforce direct reciprocity with the offending countries and States; but that was no excuse for the Council completing schemes of reciprocity on terms which were revolting and insulting. We stress once again the urgent need of amending the Indian Medical Council Act at as early a date as possible in order that the maintenance of an All-India Register might be brought within the scope of one of its most important functions.

This meeting of the Council was also responsible for refusing for the third time the request of the Andhra University to have its medical degrees recognised, even as a temporary measure; the official resolution in favour of non-recognition was supported by 14 members as against 6 who were for granting recognition on temporary basis.

The 9th meeting of the Council held in February, 1938, at which the Council elected its President for the first time under the Act from amongst its members, failed again to rise to the occasion and to satisfy Indian hopes and aspirations. Although eminent Indians who had made their mark in the country both as reputed educationists and as successful practitioners of their profession, were amongst its members, the Council, to its eternal shame and discredit, elected, with the help of its overwhelming official and quasiofficial majority, the Director-General of the Indian Medical Service as its first elected President, thus perpetuating the reign of the individual who was its nominated President from the beginning of the Council's life.

This is, in short, a brief review of the work done in the last Council. If similar discomfitures have to be avoided in the new Council, it is absolutely necessary that the provinces of C. P. and Berar, Sind and N. W. Frontier should all establish provincial medical councils and entrust them with the maintenance of Registers as early as possible, thus conferring the right upon their registered medical practitioners of electing their own representatives to the Indian Medical Council. The addition of these three provincial representatives would be a source of considerable strength to the elected element in the Council. It is also high time that public opinion in the country should be mobilised in favour of demanding an early amendment of the Indian Medical Council Act in order to revise its constitution, to entrust it with the maintenance of an All-India Register, to remove or reduce the heavy official element in its constitution, to provide for the election of the President of the Council from amongst its elected members only and to vest the Council with real powers in all matters of recognising or refusing to recognise foreign medical qualifications on terms of direct reciprocity.

All this implies incessant work, intensive study of the methods of work of other Medical Councils of the World and a degree of circumspection which nothing on earth can beat. It, therefore, lies within the newly elected members of the Council to vindicate the honour and dignity of the profession and to justify the confidence reposed in them by their constituents. And we sincerely hope that they will rise up to the occasion not only in resisting all undue influences and official pressures but also in serving the best interests of the country by upholding the best traditions and integrity of the noble profession which they all represent.

CASE NOTES

ALLERGIC (?) SYMPTOMS IN CASES OF KALA-AZAR TREATED WITH ANTIMONY SALTS

N. C. DASGUPTA, M.B.

Khulna

Case 1. Mahomedan male, aged 14 years; fever for several months, spleen enlarged down to the umbilicus, liver slightly enlarged, aldehyde test + + + +. 0·02, 0·04 and 0·05 grm. of Urea Stibamine were successively injected intravenously every 4th day without any untoward effect. The next dose given was 0·07 grm. About two minutes after this injection, the opposite anticubital space began to itch severely and swelled; rapidly urticaria-like eruptions with intense itching appeared all over the body, the eyes became intensely congested, lips and tongue greatly swollen, there were dyspnœa and cyanosis and the patient lost consciousness. Adrenalin chloride solution (P.D. & Co.) 1 c.c. was injected subcutaneously. Within 2 minutes the eruptions subsided; but he vomited a quantity of undigested food which he took the previous night. His pulse became rapid, thready and intermittent, and he was given an injection of strophanthin gr. 1/200. All this time cold douche was being applied over the head. His pulse and general condition improved. The douche was continued for two hours more and then stopped. But within half an hour, the eyes became red again. The douche was re-applied and adrenalin m x was given under the tongue, and he gradually improved. Six days after this, he was given 0·05 gm of Neo-Stibosan intravenously. Immediately he began complaining of a severe burning sensation all over the body, and was retching but did not bring out anything. Again adrenalin and cold douche made him all right. Ten days afterwards he was injected Aminostiburea 0·025 grm.; and then Urea Stibamine 0·025 grm. and Neo-Stibosan 0·05 grm. were continued alternately every fifth day without any further trouble. He was cured after 14 injections, the maximum dose given at a time being 0·10 grm.

Case 2. Hindu female, 40 years; duration of illness 3 weeks, spleen slightly enlarged, Chopra's test positive (+). She was given Urea Stibamine 0·005 grm. intravenously. At once she began to vomit, and rash appeared all over her body; within a few minutes she was found bleeding per vaginum. The hæmorrhage was uterine and the quantity moderate. An injection of adrenalin chloride relieved her of all the symptoms. It should be noted that the patient was neither near her menstrual period nor pregnant. I am indebted for the details of this case to Dr. N. C. Das Gupta, M.B. of Kalia.

Discussion

Symptoms like those of Case 1 were of frequent occurrence and death even was not altogether rare in the early days of Urea Stibamine treatment when we used it in the graded doses issued by the manufacturers (Bathgate & Co.), that is, for an adult 0·05, 0·10, 0·15 and 0·20 grm. were used successively without any consideration for weight, general condition or idiosyncrasy of the patients. But since we have been using 0·01 to 0·10 grm., or even smaller doses according to the circumstances of the cases these allergic (?) symptoms have become extremely rare. On the other hand, we have found these smaller doses quite effective, and the total quantity of drug required is much smaller.

CURRENT MEDICAL LITERATURE

MEDICINE

Advances in Medicine

Moore (*Practitioner*, October, 1938, page 357) in reviewing the advances in medicine made during the period of 1937-38 writes that the greatest achievement is the introduction of sulphanilamides for the treatment of infections such as puerperal infection, erysipelas, meningitis due to meningococci, streptococci and pneumococci, gonorrhœa, various genitourinary infections including those due to B. coli, undulant fever, chancroid and finally acute lobar pneumonia by a new compound named M & B 693. The sulphanilamides act only as a blood borne antiseptic and its direct application is of little value.

The next thing of notice is the use of protamine zinc insulin in diabetes mellitus. This insulin is absorbed very slowly from the tissues, exerts its hypoglycæmic action over a longer period of time and thus less frequent injections are necessary. Protamine zinc insulin is cumulative and its full effect when used daily may not be evident for several days and hence should be used cautiously or severe hypoglycæmic reactions may follow which develop rather insidiously and persist longer than reactions caused by soluble insulin.

The third achievement is the antisera treatment of pneumonia. Group IV pneumococci have been classified into types and the use of these type antisera have met with success. Moreover antipneumococcus serum obtained from the rabbit may be therapeutically more potent than that obtained from the horse because smaller molecule of protein of the rabbit serum has greater power of penetration into the lesion. Lenghlim's record of mortality rate as 7·4% with the use of rabbit's serum clearly bears out the truth of the above statement.

The increasing use of flexible gastroscope is another striking advance and it is of great value in the diagnosis of the type of gastritis, in determining whether the lesion is benign or malignant and in studying the appearance and healing of an ulcer.

The introduction by Mutch of synthetic magnesium trisilicate as an efficient antacid for the treatment of hyperchlorhydria is certainly a great advance. Its action is slow and prolonged. It is moreover antiseptic and antitoxic and as such is an ideal drug for peptic ulcer. 35 grains should be given 3 hourly for acidity upto 0·3 per cent. and similar doses 2 hourly for acidity between 0·3 and 0·35 per cent. and higher doses for extreme cases.

The new histological finding by Magnus and Ungley in the stomach and duodenum in Addison's disease revealing severe atrophy of all the coats including the m.m. of the upper two-thirds of the stomach with no abnormality in the pyloric antrum and the first part of the duodenum cannot easily explain as before the absence of Castle's intrinsic factor which is said to be formed by the m.m. of the pyloric end of the stomach and the first part of the duodenum.

The medical management of chronic gall-bladder diseases as suggested by Moch relieves the symptoms in a large percentage of cases and it consists of the administration of (1) ketocholanic acid by mouth to stimulate the flow of bile, (2) a high fat diet (hourly feedings of milk and cream) to induce contractions and emptying of gall-bladder and (3) antispasmodic medications, *e.g.*, tincture belladonna and elixir phenobarbitone to diminish gastro-intestinal irritability.

Goldblatt's work on secondary vascular hypertension caused by producing ischæmia in the kidney in experimental animals has given a new light on the problem of essential hypertension.

Heparin introduced by Best and his co-workers is a purified anticoagulant effective in the prevention of venous thrombosis and also in the thrombosis already existing. It has also been found useful in prevention of coronary artery thrombosis in dogs.

The importance of increased intake of sodium and diminished intake of potassium in the treatment of Addison's disease is emphasized by Wilder *et al.* Plastic cortical grafts have produced marked improve-

ment in a number of cases. The use of corticosterone, the active constituent of cortical extracts has met with success, so also the synthetic product, *viz.*, desoxycorticoacetate.

'Thrombocytophen' is the substance obtained by Troland and Lee from the spleen in three cases of thrombocytopenic purpura which when injected into normal animals produced a reduction of platelets by 90%, greatly prolonging the bleeding time. This explains also the rationale of splenectomy in persistent thrombopenia.

There are few more examples and they are the use of very concentrated form of liver extract in Addisonian anæmia (maintenance dose is ½ to 1 c.c. every 2 to 4 weeks), the use of sex hormone of antepituitary body in non-descent of testicles, of liberal diets in gastroduodenal hæmorrhage, the treatment of peripheral arterial disease by intermittent venous occlusion, the use of vitamin B_1 in peripheral neuritis or peripheral nerve degeneration, nicotinic acid as an antipellagra remedy, concentrated blood serum as a diuretic in nephrosis, the use of chest leads in electrocardiograms and of calcium mandelate in the treatment of pyelitis and cystitis.

Referred Pain Of Cardiac Origin

Robertson and Katz (*American Journal of Medical Science*, August, 1938, page 199) describe a new method of "Cuff test" for the diagnosis of angina pectoris. The test consists of producing for 5 minutes ischæmia in the left arm by raising the pressure in the blood pressure cuff to 50 mm. Hg. above the usual systolic pressure. This procedure produced anginal attack in nineteen out of twenty-four patients with angina pectoris. The test was negative and did not produce anginal pain in fifty-five cardiac and non-cardiac controls and in thirty-nine patients with doubtful angina pectoris.

Blood Sugar And Cardiac Involvement In Rheumatic Fever

Steincrohn (*Journal of American Medical Association*, November 12, 1938, page 1837) reviews the literature and writes that rheumatic heart disease is rarely encountered in patients having diabetes mellitus. From his personal study of blood sugar tolerance in a small series of 58 patients with rheumatic fever and rheumatic heart disease he observes that a large percentage of cases had flat blood sugar tolerance curve (9 out of 11 children had flat curve). The author contends that blood sugar determinations should be made in all patients with acute rheumatic fever and if the percentage of flat curve be high, larger amounts of dextrose should be administered to determine its effect, if any, on the course of the rheumatic fever and its cardiac complications.

Treatment Of Hæmophilia With Female Sex Hormone

Kocsis and Hassko (*Deutsche medizinische Wochenschrift*, September 2, 1938, page 1284) taking into consideration the fact that women do not suffer from hæmophilia though they transmit it to their offsprings tried to counteract hæmophilia with female sex hormone. The hæmophilic hæmorrhage is treated with female sex hormone given daily in doses of 500 to 1000 mouse units by the intramuscular route. This treatment is supplemented by oral use of corpus luteum. In severe hæmorrhage the hormone should be given intravenously. Topical application of ovarian hormone is effective in stopping bleeding caused by tooth extraction. *In vitro* tests ovarian hormone has a pronounced coagulating effect on hæmophilic blood.

Adrenalin, Morphine And Aspirin In Asthma

Duke (*Journal of American Medical Association*, August 20, 1938, page 738) writes that in bronchial asthma which occurs in children and young adults adrenalin is the drug of choice. It acts promptly and effectively and apart from temporary nervous effects it is harmless and is not habit forming. But in certain percentage of cases it fails and the patient often goes in for the alarming condition with cyanosis, dyspnœa, orthopnœa, tachycardia, etc., when one is tempted to give morphine which quietens the patient for a short while but may bring a fatal end. Morphine lessens the cough reflex and so increases the obstruction, it depresses the respiratory centre in the brain and may act allergically causing an acute reaction. The author stresses on the point that the combination of adrenalin and morphine should never be used. In severe cases of intractable asthma adrenalin may be

used intravenously well diluted with the patients' blood drawn in the syringe. However, morphine is highly efficacious in cardiac asthma occurring in older persons with high blood pressure, nephritis or aortic regurgitation. In such cases morphine should be given in ¼-½ grain doses hypodermically and repeated when necessary. Aspirin is quite effective in bronchial asthma but it should not be used in persons who are hypersensitive to it. A wise rule before using it is to question the allergic patients as to the possible drug idiosyncrasy.

SURGERY

Treatment Of Obstructive Jaundice

Fraser (*British Journal of Surgery*, October, 1938, page 393) summarises in the following lines his observation on the treatment of obstructive jaundice:—

1. One thousand and thirty-five cases of obstructive jaundice arising in relation to pancreatic disease form the basis of the review.

2. The condition is more common in males than in females in a proportion of 2 to 1.

3. The 'peak' age-incidence (fifth decade) is common to both simple and malignant conditions.

4. Even at operation the true nature of the morbid anatomy may be difficult to establish. It appears that 7 per cent. of simple cases are mistaken for malignant disease, while 16 per cent. of the malignant cases are classified as simple.

5. The degree of jaundice may offer a clue to the diagnosis of the malignant case.

6. An immediate direct van den Bergh reaction is an infallible indication of the obstructive nature of the jaundice.

7. The pancreatic source of the obstruction may be established by: (a) The sequence of the case history; (b) The characters of the pain; (c) The state of the gall-bladder.

8. Barium-meal investigation is of little or no value.

9. A knowledge of the degree of the obstruction is afforded by the icteric index and serum-bilirubin readings. The results of these tests aid in assessing the prognosis.

10. An estimate of the extent, the site, and the nature of the pancreatic disease may be arrived at by examination of the fat content of the stool.

11. Sugar-tolerance and blood-urea readings offer reliable information regarding the effects of the obstruction on the liver and renal functions.

12. Blood-coagulation readings yield uncertain results, and the value of the investigation is doubtful.

13. There is diversity of opinion in respect of operating for obstructive jaundice arising from pancreatic disease, but the overwhelming majority favour operation.

14. Of the various types of operation internal drainage or anastomosis procedures are those most favoured, and cholecyst-gastrostomy is the choice in 45 per cent. of instances.

15. The operation mortality figures are: (a) For all classes of cases, 40·1 per cent; (b) In malignant disease of the pancreas, 51·84 per cent; (c) In chronic pancreatitis 19·8 per cent.

16. There is an association between the jaundice grade and the mortality rate.

17. Cholæmia is quoted as the commonest cause of death. Its effects are exerted about the fifth day, and its development appears to be related to the sudden decompression of the biliary system.

18. 'White bile' is a most ominous finding; the associated mortality is 82·5 per cent.

19. A study of the survival period following operation for malignant disease of the pancreas shows that 90 per cent die within the first year, but during life the large percentage enjoy freedom from pain, jaundice, and pruritus.

20. A similar analysis in chronic pancreatitis shows that 60 per cent. of cases are alive at varying periods exceeding one year after operatioin, and are enjoying relatively good health. When relapses occur they are apt to be associated with previous operations of the surface-drainage type.

The Use of Heparin in Thrombosis

Murray and Best (*Annals of Surgery*, August, 1938, page 163) write that there was not a single case of phlebitis, thrombosis and pulmonary embolism in a series of 315 cases treated postoperatively with heparin injection and there was marked clinical improvement in 24 hours in seven cases of pulmonary embolism with infarcts arising from thrombophlebitis when treated similarly. The injection is given into a superficial vein with an ordinary steel needle which is kept in position for from three to eight days. Sufficient heparin is added to the salt solution to increase the clotting time to 15 minutes. 10 units to 1 c.cm. of saline is the usual heparin addition and the injection is continued till the blood pressure and circulation returned to normal. There were no toxic symptoms after injection, only four cases developed hæmatoma. The presence of active hæmorrhage is a contraindication to the use of heparin which should be deferred for from 4 to 24 hours after operation.

Treatment Of Prostatic Hypertrophy With Synthetic Testicular Hormones

Aberholtzer (*British Journal of Urology*, September, 1938, page 237) recommends in prostatic hypertrophy the treatment with testosterone propionate in an oily solution. The drug is to be given intramuscularly in doses of 5 to 10 mgm. (250 I. U.) daily or 20 mgm. every four days. No untoward results were observed even when larger doses were used. Twenty-seven out of thirty-four patients responded well to the treatment. An improvement must be recorded before suspension of treatment: On an average some amelioration of the symptoms occurred in ten to twelve days. The improvement of disease consist in the lessening of the frequency of micturition, ease in emission of urine and disappearance of urgency and burning sensation. There was no definite decrease in the size of the prostate although the swelling was arrested. Blood pressure was reduced in a large percentage of cases and there was marked improvement in the subjective symptom in all the cases so treated. Testosterone propronate injections also relieve, to a great extent, the symptoms of cancer of the prostate.

Sulphanilamide In The Treatment Of Acute Mastoiditis

Horan and French (*British Medical Journal*, November 5, 1938, page 942) write that since the introduction of routine use of sulphanilamide in all cases of acute otitis media in the Royal Naval Hospital, Chatham, the incidence of mastoiditis has fallen from 22·7 to 4·5 per cent. The preparation used was Crookes' colsulanyde given orally in doses of 1 drachm every four hours.

Infra-Red Rays

Humphris (*British Journal of Physical Medicine*, April, 1938, page 118) writes that infra-red rays by the penetrative power reach the deep seated arteries and veins and cause their dilatation. The chief use is for relief of pain and hence they are employed in all kinds of arthritis, myalgias, many forms of injury, and in varicose and other chronic ulcers. The author has used them in abdominal pain. They are contraindicated in cases where there is increase in pain after exposure. They should be avoided on diabetic cases which seldom tolerate heat. The minimum length of exposure should be thirty minutes and the length of subsequent treatment may be increased upto an hour. The treatment should never be "unpleasant to the patients."

TROPICAL MEDICINE

New Treatment For Dermal Leishmaniasis

Flarer (*Presse Medicale*, September 17, 1938, *Ref. Journal of American Medical Association*, November 5, 1938, page 1803) writes that dermal leishmaniasis being comparatively frequent in Sicily, and its treatment not being entirely satisfactory as yet, he decided to try the antiprotozoal medicament atabrine, which had been found highly effective not only in the treatment of malaria but also in another protozoal disease, namely lambliasis. The author describes his experiences with this treatment in fourteen cases of dermal leishmaniasis. In the first four cases he combined general and local treatment. The general treatment consisted either in the oral or in the intravenous administration of the medicament. Although it improved the local lesions and reduced

the number of protozoans, they did not completely disappear until local treatment was instituted. In the first case, the author says, it was given in the form of intradermal injections so as to soak the entire ulceration with atabrine dissolved in distilled water. The slight œdema which followed persisted for about twenty-four hours, but without a trace of inflammatory reaction and without noticeable local pain. The ulceration regressed rapidly and the protozoans disappeared and remained absent after a month of observation, in the course of which the ulceration had been smoothed out. This and three other cases, in which general and local treatment was used, having convinced the author that the local treatment was the more effective, he used local treatment exclusively in the other ten cases of dermal leishmaniasis. In four cases he tried half doses (0·05 gm. of atabrine) repeated twice at three-day intervals. Since the local tolerance was excellent, he later administered 0·1 gm. of atabrine dissolved in 1 or 2 c.c. of distilled water, depending on the size of the ulceration. This treatment was followed by permanent cure with disappearance of the protozoans, even after a single injection. The author concludes that it is unquestionable that this treatment has advantages over all of those hitherto employed.

Sulphanilamide In Tertian Malaria

Hall (*Journal of Experimental Pharmacology and Experimental Therapeutics*, August, 1938, page 353) in reporting on the effect of the administration of sulphanilamides in 4 cases of general paralysis treated with tertian malaria observes that there is no alteration in the cyclic changes of the parasites and concludes by saying that sulphanilamide is of no value in tertian malaria.

Mechanism Of Oedema In Helminthic Anæmias

Salah (*Transactions of the Royal Society of Tropical Medicine and Hygiene*, January, 1938, page 431-436, Ref. *Tropical Disease Bulletin*, September, 1938, page 673) writes: "Twenty-two cases of helminthic anæmia with œdema were subjected to critical clinical, biochemical and therapeutic studies in order to investigate the various causative factors and the mechanism of production of the œdema. The following results have been obtained: Three cases showed a circulatory factor. Three cases were due to the anæmic state. Twelve cases showed hypoproteinæmia (biochemically investigated); four additional cases responded to high protein diet. Neither the hypoproteinæmic nor the normal cases showed any evidence of avitaminosis B_1. In addition to the demonstration of the various causative factors that may be concerned in the production of this œdema and the blood changes associated with it, the investigation indicates new lines of treatment for this condition. By replacing the deficiencies in the blood chemistry the equilibrium will be re-established and not only the disappearance of œdema but also adequate blood regeneration will be helped."

Tests Of The Suitability Of Hydnocarpus Oil For Injection

Low and De (*Leprosy Review*, January, 1938, page 382) points out that the oil should be prepared from fresh fruits after removing the dirty outside of seeds and filtered to get rid of such impurities. The specific rotation of a good oil should be from 53 to 57, the acidity should be less than 3 per cent. and only a small amount of peroxides should be present. The oil should be kept in a cool place to prevent oxidation and not be used after one year.

Racial Variation In Leprosy

Lowe (*Indian Medical Gazette*, October, 1938, page 591) in reporting the differential manifestations of leprosy between Indians and Burmans observes that the neural type is more common among the Indians whereas the lepromatous type is more common among the Burmans, that in India neural and lepromatous types can be easily classified whereas in Burmans the two types are not so clear cut and that in Burmans there is formation of marked local lesions without any apparent skin involvement whereas in Indians the lesions are more diffuse with infiltration of the skin. These differences suggest that the Burmans have much less natural resistance to leprosy and this is, according to the author, racial and hereditary.

Cobra Venom In Nerve Leprosy

Chowhan and Chopra (*Indian Medical Gazette*, December, 1938, page 720) write that the injections

of cobra venom relieve the symptoms in a large number of cases of nerve leprosy which is very common in India (about 75%). The authors point out that the venom destroys the newly formed cells and may, therefore, act on these new growths disregarding the presence of M. lepræ. They suggest further trial of the drug by itself or in combination with vitamin B complex in neural leprosy prevailing in India.

Treatment Of Entamœbiasis And Other Intestinal Troubles With Entero-Vioform

Girges (*Journal of Egyptian Medical Association*, April, 1937, pages 154-156, Ref. *Tropical Diseases Bulletin*, August, 1938, page 588) reports on the successful treatment of 279 cases of intestinal amœbiasis with Entero-vioform. In acute cases 3 to 4 tablets each containing 0·25 gm. are given in a day after the chief meals for seven to ten days and this course is repeated after a week or ten days. In chronic carrier cases oral treatment is supplemented by local treatment which consists of an enema containing two to eight tablets crushed in 150-200 c.c. of warm water to be given daily for eight to twelve days. The toxic manifestations are nil. The drug is specially useful in cardiac cases in which emetine is contra-indicated and in chronic carrier or emetine-resistant cases.

OBSTETRICS AND GYNÆCOLOGY

The Value Of Urea Clearance Test In Pregnancy

Brown (*British Journal of Obstetrics and Gynæcology*, October, 1938, page 786) writes that in assessing the value of urea clearance test the following facts must be considered, *viz.*, a normal clearance test does not mean always a normal kidney, the clearance value is influenced by alteration in the circulation rate and oxygen supply to the kidney (the results are lowered in severe anæmia and cardiac decompensation), a low clearance in an apparently healthy patient should be repeated and it must be known that variations of less than 20% are not of any significance and that a damaged kidney shows more fixed clearance than a normal one. The urea clearance test is of great value in diagnosis, prognosis and treatment of toxæmia of pregnancy. The test is useful in differential diagnosis between pre-eclamptic toxæmia, chronic nephritis and essential hypertension. Before delivery a high clearance value excludes chronic nephritis and if there is high blood pressure with very little other evidence of toxæmia and if the clearance is high the case is one of essential hypertension, but if it is low differentiation cannot be made during pregnancy but after delivery pre-eclamptic cases usually show a rapid rise in the clearance value within a week whereas chronic nephritic cases do not. If the clearance is high during toxæmia the prognosis is good even if the degree of toxæmia is clinically severe. When the test is remaining stationery or rising the conservative treatment can be safely continued. The greatest value of the test is in detection of renal damage by showing persistently low clearance values several months after delivery when clinical signs may be very slight or even absent.

Suppression Of Lactation By Oral Œstrogen Therapy

Phillips (*British Medical Journal*, October 29, 1938, page 887) reports on the success achieved with oral use of Progynon in suppression of lactation made necessary owing to still birth, weaning, breast abscess, puerperal mania, tuberculosis of the mother and death of the child after birth. In 84% the breast was comfortable within 4 days. Twenty-six cases required five tablets for one day, twenty-one cases five tablets for two to three days, twelve cases two tablets every two hours in five doses for one to four days and three patients had one tablet every hour in ten doses for two to three days.

A Study of 2,987 Consecutive Episiotomies

Kretzschmar and Huber (*American Journal of Obstetrics and Gynæcology*, September, 1938, page 621) summarise in the following lines their observations, *viz.*:—

1. Infection of the episiotomy wound is a minor but significant cause of puerperal morbidity.

2. The incidence of infection is greater in those cases in which the condition is repaired with silk-

worm-gut suture but the average infection in this group is less severe.

3. The incidence of infection in both types of repair increases rapidly with the complexity of associated obstetrical procedures.

4. The morbidity and end results depend upon factors other than the type of suture material used in the repair.

PEDIATRICS

Ocular Origin Of Migraine In Children

Grunert (*Munchener medizinische Wochenschrift*, September 2, 1938, page 1337) after a careful study for the last ten years of the eyes of all patients having headaches and migraine and of the relatives of these patients who complained of headaches observes that the majority of these patients had functional disturbances of the eye and that the treatment of the ocular trouble reduced or completely removed the general symptoms to such an extent that a causal connection could not be denied. 200 cases of migraine in children and young persons came under his review and ocular examinations revealed such troubles as defective refraction, disturbances in ocular equilibrium and defects in accommodation. He lays stress on the fact that even slight optic defects may cause severe subjective disturbances. He then describes different ocular treatments including the use of pilocarpine drops. These treatments effected cure in 197 children and young persons with migraine. The author concludes by observing that children suffering from migraine should have a thorough examination of the eyes.

Bacteria And Lactic Acid In Milk Treated With Citric Acid

Goeters (*Zeitschrift fur Kinderheilkunde*, August 26, 1938, page 77) writes that the whole milk treated with lactic acid is superior to all types of diluted milk used for the nurslings and this is due more to the high lactic acid content than to the acidity of this type of milk. He further observes that milk treated with citric acid is equally valuable for feeding the nurslings inasmuch as this type of milk favours the growth of the most important lactic acid bacteria but prevents the growth of bacterium coli, micrococci and tetracocci and leaves the other types of bacteria (bacillus proteus and bacillus subtilis) entirely unchanged. The author further notes that the precentage of lactic acid in the citric acid treated milk is such that it produces a healthy influence on the metabolism of the infant.

Acid In Infantile Eczema

Bray (*Practitioner*, October, 1938, page 506) writes that in cases of infantile eczema there is (a) a gross deficiency or absence of free hydrochloric acid as tested by fractional gastric analysis and (b) that the allergic reactions produced by proteins to which one is specially sensitive are due to the absorption of whole protein and such reactions cannot be produced by the latter produced of digestion of the specific aminoacids. These facts establish a rationale for the use of hydrochloric acid in infantile eczema. Acid hydrochloric dilute is given in doses of 5 minims during the first year, 10 minims during the second, 15 minims during the third, 20 minims from the fourth to the seventh and 30 minims after seven years. 60 grains of glucose are added to each dose of acids and the mixture is made up to two drachm with chloroform water.

Treatment Of Pertussis With Gold Bromide

Epstein (*Medical Clinics of North America*, September, 1938, page 1495) report on the treatment of 250 children suffering from pertussis with gold bromide in the form of elixir bromaurate in doses of one teaspoonful every four hours for children and two teaspoonfuls for adults. The result is as follows: cough entirely disappeared in 100 children by the end of 3 weeks, in 75 by the end of 4 weeks, in 45 by the end of 4½ weeks and in 30 by the end of 5 weeks—the average duration of illness in this series of 250 cases was 3-8/10 weeks. The author reports also the results of 100 children with whooping cough used as controls. Of these 100 cases 55 had usual remedies in the shape of bromides, antipyrine, phenobarbital and camphorated tincture of opium, 25 were treated with vaccines and 25 were given placebos with the result that the average duration of illness was 9 weeks amongst 55 drug-treated

cases, 10·6 weeks in 25 vaccine-treated cases and 12 weeks in the placebo-treated cases.

Urinary Infections In Infancy And Childhood

Helmoltz (*Journal of American Medical Association*, November 5, 1938, page 1719) writes that in the diagnosis of the urinary infections in infancy and childhood it is necessary not only to know the type of infection but also to know the state of urinary drainage and renal function as well as the foci of infection in the urinary tract. In the consideration of an urinary antiseptic, one has a wide choice but recently two drugs stand out prominently above the rest, *viz.*, mandelic acid and sulphanilamide and the latter again meets the greatest number of conditions successfully. Sulphanilamide has several definite advantages over mandelic acid: it can be given in the acute stage of the infection, its bactericidal effect is not entirely dependent on the reaction of the urine though it acts better in alkaline urine and it is excreted in bactericidal quantities even by kidneys that are injured. But one serious handicap to sulphanilamide as the perfect urinary antiseptic is its complete failure in infection caused by streptococcus fæcalis where mandelic acid succeeds. Mandelic acid is successful in infections in which the necessary acidity of the urine and concentration of the drug can be obtained. The author concludes by emphasizing that no patient should be dismissed as cured unless normal drainage is known to be present in the urinary passages.

Sulphanilamide In Gonorrhœal Ophthalmia

Michell (*Journal of Pediatrics*, October, 1938, page 527) reports on the successful treatment of 15 proved cases of gonorrhœal ophthalmia with sulphanilamide given in doses of 1 gr. per pound body-weight with equal amounts of sodium bicarbonate. The result is as follows: the average hospital duration of the patients was 5·8 days, 2 cases only showed corneal involvement and in 6 cases the ophthalmia had spread to the other eye. The patients who ranged in age from 5 days to 3 months tolerated the drug well and showed no toxic manifestations. 32 cases were treated with the usual method two years before the sulphanilamide treatment was started with the result that the average hospital stay was 28·5 days, that 2 cases had corneal involvement, 2 had perforations, 18 had bilateral involvement. 4 cases treated by sterile milk injections were hospitalized for an average of 16·5 days and none of them showed corneal involvement.

II BENGAL PROVINCIAL MEDICAL CONFERENCE *

PRESIDENTIAL ADDRESS BY SIR U. N. BRAHMACHARI, Kt., M.A., M.D., Ph.D.

MEMBERS OF THE BENGAL PROVINCIAL MEDICAL CONFERENCE,

I thank you most sincerely for the honour that you have done me by asking me to preside over your Second Conference which you are holding in this historic town of Hooghly. Hooghly has a great charm for me. About 50 years ago I began my college career in the Hooghly College, where I sat at the feet of illustrious men like Mr. Mann and Mr. Wheeler for the study of English, Dr. Booth and Mr. Griffiths for the study of Mathematics, and Mr. P. B. Mukherjee for the study of Chemistry. To the inspiration of the latter, I owe my love for the Science of Chemistry, which has stood me in good stead in my future researches on the application of Chemistry to Medicine. I am a Hooghly-Chinsura man and to be invited to preside over a Medical Conference held here is a matter of great satisfaction to me.

THE NEW MEDICAL CURRICULUM OF THE CALCUTTA UNIVERSITY

Gentlemen, remarkable changes have been introduced quite recently in the course of studies for M. B. Examination of the Calcutta University. Regulations have been introduced in which the Preliminary Scientific Examination is deleted and replaced by a pre-medical course of studies in the I. Sc., thus reducing the M. B. course to one of five years. I do not want to discuss here whether this change is for the better or not, but I have heard that the pre-medical I. Sc. course has not been a uniform success in Universities in India, where it has already been adopted for some years. But whatever that may be, it would not now be difficult for some of the medical schools to ask for affiliation up to the M. B. standard. It will not be necessary for those institutions to spend enormous sums of money in equipping laboratories in Chemistry, Physics, Botany, Zoology and Biology and in maintaining a staff for the teaching of these subjects.

Perhaps a large number of students will ask for admission into the medical colleges due to the reduction of the course of studies and expense and perhaps ultimately more medical graduates will be turned out every year than at present.

I am glad that recently concessions have been made in our university to licentiates of the State Medical Faculty for appearing at the final M. B. Examination by reducing the periods of study for the latter.

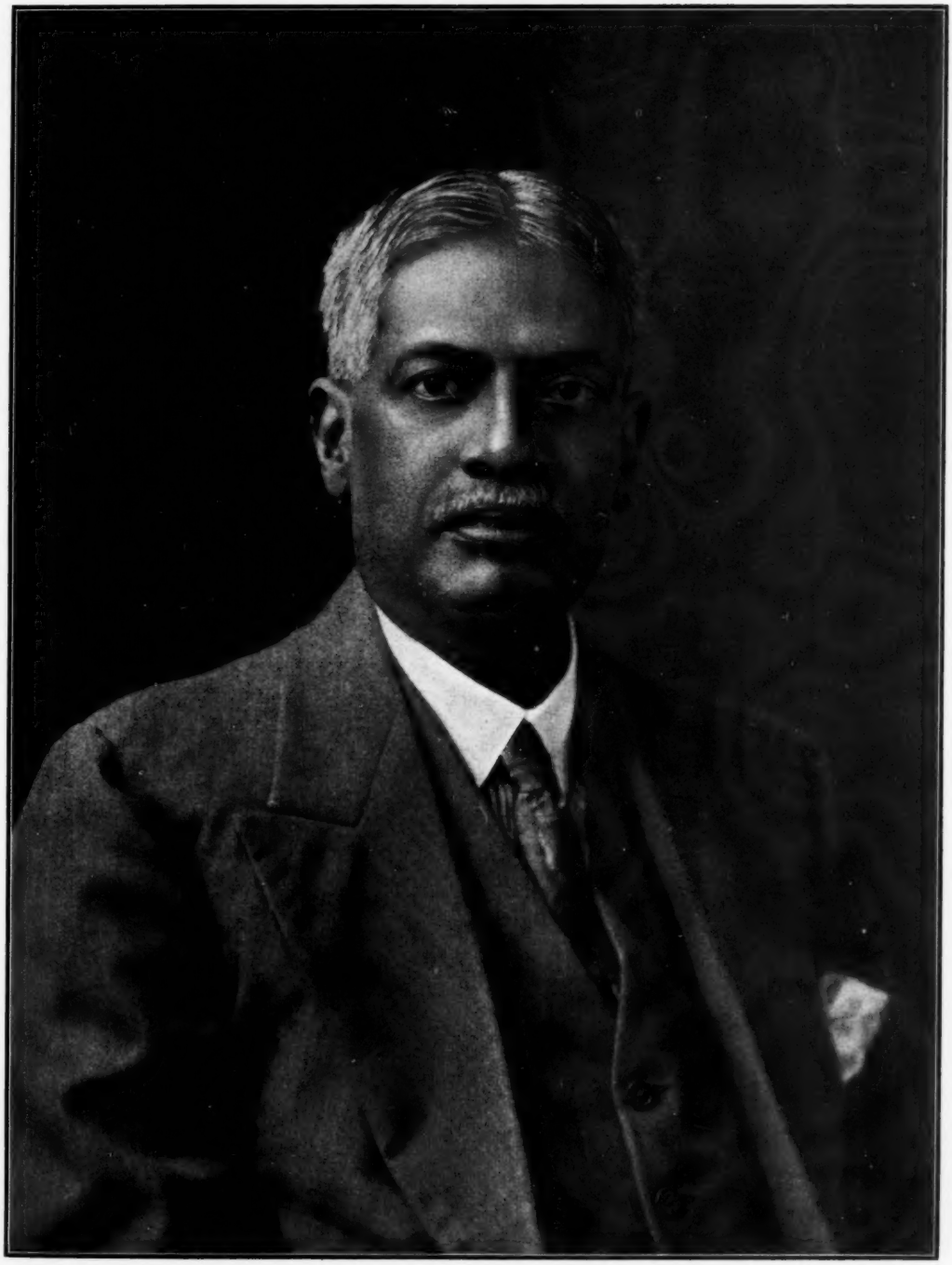
PROSPECTS OF MEDICAL GRADUATES OF THE INDIAN UNIVERSITIES TO HIGHER APPOINTMENTS

Sir Atul Chatterjee, a past High Commissioner for India, once emphatically remarked that it was no exaggeration to say that India would ultimately gain nothing either materially or intellectually by the exodus of students to foreign countries for education. He said that it was obvious that the remedy for this state of affairs lay in India. Only a public opinion fostered and supported by official action, both on the part of the Government and the Universities, would succeed in discouraging the going abroad of students. An official announcement in plain and emphatic terms to the effect that a foreign degree or training was in no way an essential qualification for the various Government appointments would be bound to have effect in the way of encouraging young students to stay in their own country.

It is therefore thousand pities that in very recent times there has been a tendency on the part of many responsible persons to have the view that a foreign qualification is a necessary passport to higher appointments in Medicine—a view, I am sorry to say, entertained even by persons on whom depends the standard of teaching and training for University degrees in Medicine in this country.

Gentlemen, the time has come when it must

* Address delivered at the Town Hall, Hooghly, on the 23rd November, 1938.



SIR UPENDRANATH BRAHMACHARI, Kt., M.A., M.D., Ph.D.

President, Bengal Provincial Conference, 1938.

be definitely settled whether Indian degrees should not be sufficient for these posts. It is unfortunate that this point has at all to be discussed when we all know that graduates of Indian Universities in other faculties have been allowed to occupy the highest posts in their respective lines. If it is held that the teaching of Medicine in Indian Universities is not of such a sufficiently high character as to entitle their graduates to hold posts which others possessing foreign qualifications can claim, then there is the inevitable conclusion that the teachers in our medical colleges are responsible for this state of affairs. I would therefore ask them to try to remove this stigma and rise up to the occasion to uphold the value of their teaching to their students and declare to the public and the Government that their standard of teaching is as high as those obtainable in foreign countries. It is curious that while the medical colleges in India have got much greater facilities for the teaching of tropical medicine than anywhere in the world, the graduates with Indian degrees should ever be considered to stand on a lower footing than those holding foreign qualifications.

In this connection a resolution passed at a meeting of the Inter-Universities Conference held at Delhi sometime ago is very significant. It was resolved that if it is considered impracticable by the Government to discontinue recruitment to the I. M. S. by selection, then preference should be given to graduates of Medicine and Surgery of Indian Universities.

Similarly the Indian Provincial Medical Association have urged on the Government that in selecting candidates for higher appointments in research institutes and the medical colleges and in selecting visiting physicians, surgeons and superintendents of hospitals attached thereto, no distinction should be made between the holders of Indian and European qualifications and that a foreign qualification should not be considered as an essentially necessary condition for their eligibility for these posts.

Is it not strange that third class men from foreign Universities without any distinction of credit to themselves during the whole of their college career are allowed to supersede the claims of the most brilliant graduates of Indian Universities? Is it not distressing to note that graduates possessing the highest degrees from Indian Universities are superseded by others because the latter possess some foreign qualifications? I ask how many members of the independent medical profession holding Indian degrees are on the senior staff of the medical colleges and schools or hospitals under the Government. I understand that in Europe the graduates of a particular University are given preference in filling up teaching appointments in that University. But the contrary holds in India. Though, as was the advice of old Brodie, a great physiologist of his time, medical men should not meddle in politics, yet for a moment I would enter into the arena of politics and ask what our political leaders are doing to ameliorate the unfortunate state of the medical graduates of Indian Universities in this connection. Let them remember that true Swaraj in India should start with the full appreciation and recognition of the worth of the indigenous products of our Universities by the members of the Government. Far be it for me to put foreign education at a discount, but what I deprecate is that foreign qualifications should be considered as absolutely essential for eligibility to higher posts. I hope I shall be pardoned if I have been out-spoken about the legitimate dues and demands of our graduates.

I just now stated that the prospects of graduates with Indian degrees for higher appointments are gloomy. It is still more so in the case of diplomates of the State Medical Faculty. To-day their education is of a high standard and there is no reason why higher appointments should not be thrown open to their deserving members as well.

Medical Research

May I now for a moment digress into the fascinating field of medical research? Medical research has been the highest ambition of my life, which I have carried on at the stake of my health and of the practice of my profession as a consulting physician.

I shall never forget the small room in the Calcutta Campbell Hospital at Sealdah, where I carried on my researches, the room where I had to labour for months without a gas point or a water tap and where I had to remain contented with an old kerosene lamp for my work at night. The room still remains but the signs of a laboratory in it have completely disappeared. To me it will ever remain a place of pilgrimage where the first light of urea stibamine dawned upon my mind.

India needs institutions like the National Institute for Medical Research. The Rockefeller Foundation has extended its generosity to India by creating fellowships for Indian scholars, by initiating research in India in tropical diseases and by helping in the foundation of the All-India Institute of Hygiene and Public Health. May the Indian princes, commercial magnates and owners of hoarded wealth of India, aided by the Imperial and Provincial Governments come forward for the creation of a federal institution for medical research in India.

Some years ago, Lord Rutherford, at an Annual Meeting of the Royal Society of Medicine, referred to the application to Medicine of scientific methods and the growth of the ancillary sciences, namely, Physiology, Bacteriology and Biochemistry. He remarked "I foresee the time, not far ahead, when more funds and more help will be available to extend in a multitude of directions that scientific work which lies at the basis of your profession and which is necessary if you are to gain any serious understanding of the human body. You have made great advances, but I am sure that all of you here know how little has been done, and how much remains. I feel confident that in the future every country in the civilized world will join in an international attack on the problem of the diseases that afflict mankind." The above remarks are specially applicable to tropical diseases.

May we hope that before long there will be in India full co-operation between the official and non-official research workers in Medicine; that proper facilities will be given for research in medical schools and colleges, whether official or non-official; that the independent medical profession will be allowed to work in research institutions, whether state-owned or otherwise; and that the researches in Medicine conducted in different parts of India will all be pooled together for annual discussion in the Section of Medical Research of the Indian Science Congress Association or some other organised body; and finally that ample funds will be placed at the disposal of the Indian Universities and medical schools and colleges for medical research.

The Practitioner in the Rural Areas

Gentlemen, you have much work to do in your spheres of action. Many of you belong to the urban, rural and sub-rural areas. They have to take part in rural reconstruction, in making attempts at mitigating the miseries of the sufferers from malaria, kala-azar and other serious tropical diseases, they have to develop schemes and put into practice methods of rural hygiene and sanitation which may vary in the different parts of our Province where they live, they have to undertake child welfare and maternity work in their own places and try to be Red-Cross minded. To those among you who belong to the villages, I would suggest that a group of contiguous villages should join and develop model villages. You have your local boards, union boards and district boards. You should take part in the activities of these bodies and press on them the needs for the betterment of the health of the people and the nursing and treatment of the sick. You should inculcate in the minds of the people how to avoid cholera, malaria, tuberculosis and other preventible diseases.

It has frequently been remarked that medical graduates mostly congregrate in the towns and cities. What is the reason? Not so much the amenities of the latter that attract them, but the hardships of the profession are very great in the rural areas. Unless there are better transport facilities and greater conciousness in the minds of the people about the value of the Western methods of treatment and more efficient checking of the practice of medicine by unqualified men, the medical graduate finds no attraction in the rural areas. In these places, he suffers from malaria and kala-azar, his income is meagre and he has to incessantly fight the quack who tries to practise the Eastern and Western systems of Medicine in most unscrupulous ways.

The Eastern Systems of Medicine

In some of the Provinces in India as in Bengal, Government has recognised the Eastern systems of Medicine. Whatever views one may have about these, there is no doubt that there is much to learn from these systems. You are extracting the active principles of chaulmoogra, of kurchi, of babchi and a host of other drugs recognised in these systems of Medicine and you are utilizing them to your greatest advantage. I do not wish to discuss what would be the best means of adapting these systems to modern methods, but I am sure that one day this will be

effected in a satisfactory way and perhaps at no distant date there will be a unification of the Eastern and Western systems of Medicine which will be of the greatest benefit to the people of the country.

The Influence of the Medical Profession

The hopes of the world rest upon the success and ever-growing usefulness of the medical profession. It must be abundantly evident to every one attending your meetings that the influence of medicine and medical practitioners is growing enormously. No thoughtful person can doubt that in the near future we shall see an enormous advance in the importance of medicine; it is not a question of rank but of influence. In the present day one cannot fail to be struck by the great increase in the varied functions that have come to be regarded within the province of the medical man. He has made encroachments on the functions of the lawyer, the priest, the legislator and the statistician. He has assumed some of the duties of the parent and guardian, while even the soldier and the policeman are to some degree under his control. In the ordering of their lives, and even in the regulation of their vices and the reform of their shortcomings, men and women are far more willing to seek the advice and help of the medical man than once they were. The reason is, without doubt, that his advice is much more worth having than it once was.

Concluding Remarks

Bengal Branch of the Indian Medical Association

Gentlemen, how happy one feels when one sees foreign diploma holders, university graduates and diplomates of the state medical faculty have met to-day on a common platform to exchange their ideas for the good of the profession and the country. Here there is no jealousy, no undue rivalry, no feeling of superiority or inferiority complex. Yours is a missionary work and your motto should be the well-being of mankind. Strive to maintain the dignity of your profession. Let the rich among you sympathize with those that are less fortunate. Let your seniors be respected and let them in their turn guide the younger generation in the practice of your profession. Let the old and the young among you learn from each other what they can.

Let truth come from whence it may, and point never so grimly to what it may, he would be recreant to science who would for one moment hesitate to receive it.

Always remember that,

> Some errors handed down from age to age.
> Plead customs' force and still possess the stage.
> Ah that is vile,
> Shall we our parents' faults adore
> And err because our parents erred before.

Gentlemen, I would now ask you to go through the agenda of business in your various sections. You will perhaps make many important resolutions, discuss medical education, discuss scientific papers and problems of nutrition and sanitation, of medical services and the representation of the independent medical profession therein. You will perhaps discuss the problem of unemployment among medical men and how to solve it. But I do not intend to anticipate what you will discuss. I leave them to your decision.

Members of the Bengal Provincial Branch of the Indian Medical Association who are here and will meet to-morrow at your Annual General Meeting, I appeal to you to set at rest all the differences of opinion among yourselves. I ask, is there a rift in your camp? Do not waste your energy in fighting each other, but be united and strong. Try to bring about "blessed peace" in your midst. Your politicians are looking forward for provincial autonomy. You would perhaps ask for a similar provincial autonomy of your branch and to be independent of your Central Body, except in matters of All-India interest. I suppose that this is a matter that you will discuss in this Hooghly Session. Whatever conclusions you may come to, let me pray that they will be in the best interests of your branch and the profession. May your Association live and prosper.

Gentlemen, let me end my speech by quoting what I once said elsewhere. The old Hindu physician taught "Devote yourself to healing of the sick even if your life be lost by your work," the Oath of Hippocrates was, " With purity and with holiness I pass my life and practise my art", the old Unani author wrote, "Your object should be not to collect wealth but the attainment of good results of your patients and perfection in your art and profession." Let all of us strive to follow these precepts.

Upendranath Brahmachari

VITAL INDIAN HEALTH PROBLEMS

Vital problems affecting India's health were reviewed at the Sixteenth Annual Medical Research Workers' Conference which was opened by the Hon ble Sir Jagdish Prasad, Member for Education, Health and Lands, in the Conference Hall of the Imperial Secretariat, New Delhi.

An unusually large number of medical and health interests were represented including administrative heads of Medical and Public Health Departments, distinguished members of the Women's medical profession, representatives of the Indian States, military health services, railway medical organisations, the Rockefeller Foundation, the Indian Council of Agricultural Research, and others.

Remarking how grateful the Indian Research Fund Association and the delegates were to Sir Jagdish Prasad for finding time amidst his multifarious duties to be present, General Bradfield requested him to open the Conference.

General Bradfield addressing the delegates said he joined with the Hon'ble Member for Education, Health and Lands, in extending to them all a hearty welcome to Delhi. The holding of the Conference in Delhi last year had to some extent been an experiment, but the general satisfaction expressed by the delegates had encouraged the Scientific Advisory Board to suggest Delhi for a second time. By the end of the week, a decision would have to be made regarding arrangements for next year. They had anticipated the desire expressed by Sir Jagdish Prasad to see the Conference held in different large contres in India, for he understood that their fellow workers in Bombay and in Madras had already made certain suggestions in that respect. These would be considered before a final decision was reached.

Women Delegates

Looking through the list of delegates, the Director General said he had been struck by the wider number of medical and health interests represented as compared with earlier Conferences. It was a great pleasure to have again the assistance of distinguished members of the women's medical profesion, and a welcome innovation would be the attendance at their morning sessions of delegates from the Annual Conference of the Women's Medical Association of India, which was also being held in Delhi. He left sure that they would find many of the discussions both interesting and profitable.

Indian States were represented by ten officers of whom nine received a special training in nutrition survey work at the Coonoor Laboratories during the early months of the year They were glad, continued General Bradfield, that the States in question recognised the importance of the Indian Research Fund Association and realised the benefits to be derived from making contact with its activities. He welcomed representatives of the Rockefeller Foundation whose presence indicated the continued interest which the Foundation took in the promotion of public health, and Mr. Knipe and Mr. Dyer, whose special knowledge of sanitary engineering in general and anti-malaria engineering, in particular, would undoubtedly be of great value to health administrators in this country. By their assistance in promoting measures for the improvement of the health of the rural population, the work of the Rockefeller Foundation had made a definite impression on the public health of India, which would, he felt certain, prove of lasting value to progress in that field.

Military Health Services

The presence of representatives of the highly organised military health services reminded them, he stated, that the health problems of the military and civil populations in India converged so closely in many places that only cooperative action could ensure success. The necessity for that co-operation was well recognised both by military and civil administrators, and its further development would be discussed at the forthcoming meeting of the Central Advisory Board of Health.

The Indian Council of Agricultural Research, whose nutritional and other activities in the fields of agriculture and animal husbandry were so closely allied to their own, were represented this year by Mr. Kerr whom, said General Bradfield, they were

glad to welcome particularly as that was the first occasion he had attended their Conference.

The increased representation of the railway medical organisations on the occasion was gratifying to them all, and the Director General assured Dr. Cairns and his colleagues that they welcomed their participation in the discussions. The railway medical organisations in this country were large and important and, as in the case of the military authorities, their co-operation in the field of public health was of vital importance.

The railway authorities had further contributed towards making the Conference a success. General Bradfield referred to the generous action of the Railway Board in arranging that their delegates should be given the benefit of Christmas concession fares at a date considerably earlier than that on which these were ordinarily made available. This had enabled the presence of a number of research workers who might otherwise have found it impossible to attend.

Research and Finance

In discussing the affairs of the Indian Research Fund Association, its research activities during the present year and its plans for the coming year, he said he apologised if he had to open on a depressing note. But he felt it his duty to bring to their notice at once that, contrary to expectation, the financial position of the Association, which had been a cause of anxiety to both the Governing Body and the Scientific Advisory Board for some years, had not improved. Since 1932 the activities of the Association had been maintained at their present level only by drawing on capital funds, because the Government of India had been unable to give an annual grant larger than 1,50,000 compared with its previous grant of 7,50,000. It was hoped that this drain on the capital of the Association would be appreciably reduced during 1938-39 by the Government of India undertaking responsibility for the Public Health Section of the Malaria Institute of India. Unfortunately, this hope had not materialised and the Governing Body had been compelled to draw further on its capital to the extent of Rs. 4,50,000.

These facts were mentioned, the Director General continued, so that they would appreciate the necessity for close scrutiny of the proposals for next year's programme. After the unfavourable financial position revealed itself in April last, the Executive Committee of the Governing Body was compelled to consider whether some, if not all, of the newly sanctioned researches should not be cancelled. Any such step would have meant the postponement of important investigation, and would have resulted in disappointment to those workers who had convinced the Scientific Advisory Board of the merits of their particular proposals and who, in some cases, had already engaged their staff. The Executive Committee, therefore, came to the conclusion that whilst sanctioned researches should be allowed to continue, the officers in charge should be required to limit their expenditure to absolute essentials.

Provincial Responsibility

The number of enquiries being conducted this year, explained General Bradfield, was 63 compared with 53 in 1937-38 and with an average of 38 during the five preceding years. Applications had been received for the continuation of 56 enquiries and for the inauguration of 22 new enquiries, or 78 in all. It would be necessary to examine every proposal with the greatest care, but the Scientific Advisory Board and the Governing Body would, as usual, give full consideration to their discussions and to the recommendations made by the Conference.

The grants given during the present year, stated the Director General, numbered 42 to Laboratory enquiries and 20 to field enquiries. Nineteen of the enquiries were medical colleges or schools. He drew attention to a matter which, he believed, was not as fully appreciated as it might be. Whilst the Indian Research Fund Association had always considered applications for grants from medical colleges, it should be remembered that modern practice assigned a definite responsibility for research, and more particularly for investigation into problems of local interest,—to teaching institutions, which should be provided with the scientific equipment and staff to undertake them. As evidence of their active association and sympathy with the ideals of this Conference they appreciated the attendance of a number of representatives of medical colleges, many of them old friends. Their research activities called for their

sympathy, but they should also look for encouragement from the governing authorities of their own colleges and seek financial support from their Provincial Governments.

Committee's Report

Referring to the committee of six which the Governing Body had set up to enquire into the conduct of medical research under the Indian Research Fund Association, General Bradfield said that the sub-committee, after preparing a preliminary draft earlier in the year, had met last week to adopt the final form of its report to the Governing Body. All that it was possible for him to say at the moment was that the committee had taken a broad view of its terms of reference.

During the year six officers were recruited to the Medical Research Department, including one for special research in malaria. Four had already joined and the others were expected to do so shortly. The Director General trusted that these new recruits would make every effort to maintain the high standard which had in the past characterised the activities of that Department.

In a resolution passed at last years's Conference regarding the necessity for placing adequate and cheap treatment of malaria within the reach of the people, continued the Director General, they noted that the Government had instituted an enquiry into the possibilities of extending the cultivation of cinchona in India. The report of the special officer appointed to conduct that enquiry was now in the hands of the Imperial Council of Agricultural Research. The completion of this enquiry was an important step towards ascertaining the possibility of making India self-supporting in the matter of its quinine requirements.

Cholera Danger

General Bradfield made special reference to the question of cholera. The great danger, he said, which this disease continued to present in India was illustrated last spring when, as a sequel to the large *mela* held in Hardwar, an epidemic broke out and spread over wide areas of the country. The administrative control of these outbreaks would be more suitably discussed at the Central Advisory Board of Health meeting which was to be held early in January. At this Research Conference they were more concerned with the efforts being made to elucidate the causes of such regrettable outbreaks and they would be able to assess the results achieved by the enquiries which had been in progress during the last five years.

Owing to the uncertainty which existed in regard to the relationship between the V. Choleræ and other vibrios, and in regard to the serological differentiation of the different types, the International Office of Public Health in Paris had decided that special investigations on these questions were urgently necessary. As a result of earlier work, it had been made evident that many points could only be cleared up by research carried out in endemic and epidemic cholera areas and India was asked to undertake this work. Owing to the nature of the problem the work in India had naturally fallen into two phases, one laboratory investigation and the other conducted in the field. The phase of laboratory investigation had involved the collection and detailed examination of some thousands of vibrio strains from cases of cholera, from carriers and from water. Their work had proved that vibrios of many different types were widely distributed in nature. but by the adoption of new serological methods, the true cholera vibrio could now be differentiated from other types, whose presence in water supplies and human carriers had in the past led to much confusion.

Field Investigations

With a new and reliable basis for the diagnosis of the cholera vibrio and with more accurate knowledge of the distribution of other types the Director General said they were now in a position to undertake on an effective basis the second phase of the enquiry, namely the field investigation of the factors concerned in the epidemiology of cholera and particularly those concerned with its persistence in certain endemic areas. The Cholera Advisory Committee would, therefore, be asked to discuss a proposal to terminate the enquiries of an essentially laboratory nature and to concentrate on field work in endemic areas such as were to be found in Bengal and Madras.

The work so far done had been undoubtedly productive and its value had been warmly appreciated by the International Office of Public Health. The

Cholera Commission of that body in its report of May 1938 recorded its acceptance of the findings made in India which had answered the questions put forward by them in May 1934. Throughout these investigations close association had been maintained with workers of the Medical Research Council in England and it was hoped shortly to present a full and co-ordinated account of this work.

Nutrition

Turning to nutrition, General Bradfield said that further progress had been made during the year. A training course for health officers in public health nutrition work, including methods of carrying out diet surveys, was held at the Nutrition Research Laboratories, Coonoor, in February and March last. Fifteen officers attended, twelve being from Indian States and the remaining three from Delhi, Orissa and Sind respectively.

Satisfactory publicity had been given to recent work of practical value to India by the issue of a Health Bulletin entitled, "The Nutrition Value of Indian Foods and the Planning of Satisfactory Diet". To increase the circulation of the important information contained in this Bulletin, the Government of India had agreed to issue it at the specially low price of two annas. Nearly 25,000 copies had been sold. An up-to-date and enlarged edition was in the press, and an important improvement, which made the bulletin of greater value to the layman, was the inclusion of Indian names for the different foods.

Last year the Nutrition Advisory Committee emphasised the finding that skimmed milk was of great value in improving the health and development of Indian children and recommended that milk powder containing not more than 4% of fat should be exempted from customs duty. This recommendation, he said, had been accepted by the Government of India, so that imports of skimmed milk from Great Britain were now free of all duty whilst the duty on that from other countries had been reduced to 10 per cent.

The important Conference of Far Eastern Countries on Rural Hygiene held in Java in 1937 recommended the establishment of a National Nutrition Committee in each country. The Government of India had accepted this recommendation and had decided that the Nutrition Advisory Committee of the Indian Research Fund Association should perform the functions of a National Nutrition Committee for India.

The value of the work done under the auspices of the Association in the matter of nutrition and the high esteem in which the Association's Nutritional Laboratories at Coonoor were held by Eastern countries, had been indicated, continued General Bradfield, by a request from the League of Nations Health Committee that the Coonoor Laboratories should assume the task of co-ordinating nutrition research in the East. This request would come before the Governing Body for consideration at its next meeting. In March last, the Governing Body had given sanction to the acceptance by the Director of Nutritional Research of membership of the League's Technical Commission on Nutrition. During his leave this summer, Dr. Aykroyd attended a meeting of this Commission.

Malaria

Regarding their malaria organisation, he stated that disappointment was experienced when the Government found it impossible for financial reasons to take over the Public Health Section of the Institute, an important element of which was the Field Experimental Station at Karnal. In 1936 this Conference had recommended that the Experimental Station should be transferred from Karnal to Delhi at the earliest possible date. There were obviously desirable reasons for making such a move. In the first place, it brought this important field unit into closer contact with the general public and with irrigation and other engineers. Moreover, a valuable museum had been built up at Karnal, but its remote situation was a serious handicap to its usefulness. The Government of India had agreed this year to give Flagstaff House in Old Delhi to the Association for housing the Field Experimental Unit and the transfer from Karnal to Delhi was now in progress. In addition, the annual malaria classes would in future be held in Delhi where the anti-malarial schemes now more or less completed would constitute an excellent demonstration of the value of anti-malarial schemes based on sound knowledge.

Yellow Fever

Last year he had made a brief reference to the danger of the introduction of yellow fever into India

owing to the rapid development of air transport. On two previous occasions at these Conferences General Graham, the late Public Health Commissioner, made a statement on the position as it then stood. An important part of their preventive organisation was the arrangement under which the Sanitary, Maritime and Quarantine Board of Egypt not only kept them informed of the movements of suspected passengers proceeding to India but also took steps to destroy mosquitoes which might be present in suspected aeroplanes coming to this country. Colonel Russell had visited Egypt last spring and later in the Conference would give them a description of the present epidemiological features of this disease and the preventive measures now taken in this country against possible introduction of infection.

After his visit to Egypt, Colonel Russell had also discussed the subject with representatives of air lines in London and later attended the May meeting of the International Public Health Office in Paris. He was able to present papers from Indian Research Fund Association workers on the following subjects: cholera. nutrition, quinine, post vaccinal encephalitis, the population problem, and tuberculosis. General Bradfield said they had been assured by the Director-General of the International Office in Paris that the papers contributed by India were received with deep appreciation, and there was no doubt that the prestige of their medical research workers stood high in international circles. That position could only be maintained by careful thought, sound judgment and hard work and the Director-General hoped that it might be possible to continue to show to the world in general that India and her research workers were determined to maintain their leading place in the field of humanitarian and scientific endeavour.

Leprosy Conference

During the year an Internationial Conference on Leprosy had been held at Cairo and India had sent seven delegates. The report of that Conference went to show that the anti-leprosy work in India had been planned on sound lines. In September, an International Conference on Tropical Diseases, with special reference to Malaria, had been organised by the Dutch authorities at Amsterdam. The Government of India had sent two delegates, but unfortunately the international crisis in some measure detracted from what otherwise would undoubtedly have been a profitable and interesting meeting. The Government of India were also represented at the International Entomological Congress held recently in Berlin.

The Central Advisory Board of Health, he stated, would hold its next meeting in Madras on January 9 and 10. Those who were concerned with maternal and child mortality would learn with interest that the special committee appointed by the Central Board to report on Maternity and Child Welfare in India had completed its task. Many of the administrative officers who were present would no doubt be present at the meeting in Madras and he recommended to their serious attention the Committee's report and the four memoranda which dealt with the other items on the Agenda.

A Primary Consideration

General Bradfield concluded by impressing especially on the younger workers that, when choosing a subject for research, they should always keep in mind the importance of its applicability to the improvement of the health of the people in India. This must always be a primary consideration with the Scientific Advisory Board in making their recommendations to the Governing Body. Scientific research was a matter to which considerable importance was attached both by Governments and the public. Their deliberations last year were the subject of wide interest and the valuable contributions made by workers in India to knowledge of disease were given much favourable comment both in the press and elsewhere. He was confident that their discussions this year would be equally helpful and stimulating.

HOSPITALS IN EUROPE

MAJOR P. BARDHAN, M.B., M.R.C.P., F.R.C.S.
Calcutta

I have to thank your association for asking me to tell you something of my experiences and observation as a medical man visiting the major important hospitals in some twelve principal cities of Europe I spent about 3 months abroad in the course of which I visited some 18 countries and a score of cities. It was a lightning tour, no doubt, but as I had one object always in front of me, I was enabled to put even this short period at my disposal to good use. My task was made lighter by contacts and friendships I made with eminent scientists and other men of different nationalities at the three International Conferences which I attended at Ghent, Copenhagen and Brussels. Their courtesy and ungrudging services I gratefully acknowledge. I am a plain medical man with very little interest in politics, arts and antiquities; consequently, I would not be able to tell you about the present political situation in Europe with all its nerve-racking complications, or about the recent artistic and other achievements by which even the most casual wanderer cannot but be impressed. At the present moment, European politics is passing through a crisis; and the whole world seems to be interested in the political situation more than in anything else. The close of our visit coincided with a most critical period—the September Crisis. The sky was overcast with dark clouds, and it looked as if the thunderstorm would burst at any moment; and there was the risk of ourselves being overtaken by the outburst. Certain aspects of life were so very much on the surface, that even the most unobservant foreigner would be forced to note them: for example, the recent measures taken by the Nazi Government against the Jews in Germany and particularly in Austria: the preparedness of both Germany and Czechoslovakia for the war, which has been averted by the sacrifice of the latter country; and the overdemonstrative Fascist movement in Italy. But these things are quite beyond my observation. However, the treatment accorded to the Jewish doctors in Vienna, and similar happenings elsewhere forced themselves very much to my notice, as these were intimately connected with the progress of the medical science. In a situation like this, when so much of destructive and disruptive forces was in the air of Europe, it was pleasing to turn one's mind to the humane side of science

These are some of the towns I visited, in order: Genoa, Geneva, Paris, Ghent, Bruges, London, Copenhagen, Oslo, Stockholm, Helsinki, Tallinn, Warsaw, Berlin, Vienna, Prague, Budapest, Brussels, Edinburgh, Rome and Naples. Practically throughout this entire tour I had the privilege of having as my fellow traveller, my old school mate, Prof. Suniti Kumar Chatterji of the Calcutta University, whose knowledge of French and German smoothened our way a great deal in most of these continental towns. But in the continental hospitals, I had to fall back upon my own resources; trusting I would come across some English speaking doctor or other person who could help me along: and it was a matter of congratulation that such English speakers were available almost everywhere, so that it was not difficult to follow and appreciate the situation when one was shown round whether in the wards, operation theatres, clinics, or laboratories.

Since my last visit to Europe in 1924, one thing, which struck me most in continental towns, more than in Great Britain, was the erection of up-to-date buildings everywhere. On the continent, more than in Great Britain hospital architecture and hospital engineering seem to be following the lead of medical science to an astonishing degree. Only in a few recent hospital buildings in India have the requirements of the medical science been strictly sought to be followed. It is a pleasure to survey from a distance the bright architectural outline and the perfect attention to the demands of present day medical science in hospitals like the Ospedale della Littoria in Rome, the Sabbatsberg Hospital in Stockholm,

the Commune Hospitals in Oslo and in Prague, and the Marshall Pilsudski Hospital in Warsaw. In most of the towns visited by us, I received the most perfect courtesy and friendliness from the persons in charge who helped me to see what I wanted; it did not matter much whether I carried letters of introduction or not; my card as a doctor from India was sufficient to obtain for me the most cordial reception. This fine spirit of comradeship and co-operation from brothers in the profession on the continent forms a most refreshing memory of my last tour.

The following are the branches of surgery and medicine in which I noticed some remarkable advances made—advances not generally known in India:—

(1) Chest surgery

(2) Treatment of fractures, both simple and compound

(3) Anæsthesia, particularly local, spinal and splanchnic

(4) Electrotherapeutics.

(5) Treatment of diabetes and chemotherapy with Prontosil and other dye products.

(6) X-ray

I shall give you a brief account of the advance in each and then I shall close with a few general observations. But I am afraid that this will bore many of you, but I shall try to be as non-technical as possible.

(1) Chest Surgery—The chest as you know forms with the head the most vital part of the body and encases delicate and complicated organs, interference with which profoundly affects the health of the individual. But the recent advances have shown to what extent man can survive the loss of what would be regarded as most vital organs. It is possible to remove a lung in part or in its entirety (technically called lobectomy and pneumonectomy), and the patient would live a fairly useful life. In this matter of chest surgery England has made good progress. Mention may be made of the eminently successful work of Dr. Tudor Edwards at the Brompton Hospital, London, and among the continental places the leadership in chest surgery is generally acknowledged to be in the hands of Prof. Sauerbruch at the Charitie Hospital, Berlin. Similar work of highly successful character is being carried on at the Sabbatsberg Hospital, Stockholm and at the Commune Hospital, Oslo.

(2) Treatment of Fractures—We all know that a war gives the greatest push to the medical science, and this has been more manifest in the treatment of serious wounds and fractures than in anything else. Operations are now performed to mitigate the effects of most serious and complicated wounds, which would seem to be something short of the miraculous. Complicated, comminuted and compound fractures are treated in such a way that the full function of the affected part can be safely restored in a shorter time than is generally acknowledged. Following the lead of Vienna, Warsaw in Poland appears to have given greater attention to this side of surgery than any other city or country of Europe. I had the privilege of visiting first this unique hospital of 1000 beds devoted entirely to the treatment of fractures, which has recently been opened in the name of the late Marshall Pilsudski, President of the Republic of Poland, in Warsaw. Col.-Lada and Col.-Sokolski, both Polish Military Medical Officers in charge of the hospital, showed me round and gave me an opportunity in seeing in detail the wonderful arrangement and equipment they have got there in the treatment of spinal and limb fractures, both simple and compound. Subsequently in Veinna I was privileged to see Dr. Bohler's hospital for workmen's accidents (Arbeiter Unfallspital). It may be mentioned that the cost of this big hospital of several hundred beds is entirely borne by the Workmen's Insurance Companies as an offset for heavy indemnity they have otherwise to pay in case of loss of limb or life.

(3) Application of local anæsthesia has made a stupendous advancement on the continent. Local anæsthesia for minor operations is, of course, very widely followed in India. In Vienna, Berlin and elsewhere, local anæsthesia is usually employed in all cases of chest surgery, abdominal surgery, thyroid surgery, plastic gynæcological operations, and in the treatment of major fractures and wounds of limbs. This advance will have an immense future in the success of operations. The terrors of an operation, particularly with a patient of weak heart, who feels nervous of chloroform, will be removed. It is quite common to see the patient talking while the surgeon is opening his abdomen or chest. This perfected

employment of local anæsthesia can be easily introduced in our Indian hospitals, as for this work no divinely gifted surgeon's finger or no special genius in passing the knife, such as we see in some surgeons in Vienna or elsewhere, is needed. Prof. Finisterer's abdominal operations for resections of stomach and intestines, etc., under local anæsthesia, which I saw at the Allgemeinen Krakenhause, Vienna, is a sight which no surgeon can witness without profound respect for the science and the skill of this great surgeon.

(4) Radium and deep x-ray which comes under electrotherapy has come to India, and radium experts are growing in number but as yet we have no special institution to take this treatment alone. I visited three important radium institutions at Stockholm, Warsaw and Prague. I was very much impressed with the success of the treatment in cases shown to me, and those recorded; and it is hoped that surgeon's knife will be made unnecessary in cases of cancer and other malignant tumours where radium and x-rays are found to be most efficient when diagnosed sufficiently early.

(5) In the sphere of medicine, notable advances have been made in the treatment of diabetes by new compounds of insulin; and of streptococcal and gonococcal infections by prontosil and other allied dye products. Research work of Drs. Hagedorn and Krarup at the Insulin Hospital, Copenhagen, attached to the factory for the manufacture of insulin, has attained world-wide recognition. Protamine and zinc-protamine insuline have given a very optimistic outlook in the mitigation of the sufferings of a diabetic.

(6) In the field of x-ray diagnosis the most remarkable development is found in the technique of tomography. With the help of this apparatus the layers of the chest can be photographed at various depths. Thus lesions, *e.g.*, cavities, tumours, tubercles, etc., which are not disclosed by ordinary radiography, can be clearly shown in tomographic pictures. The application of this technique to other aspects of x-ray diagnosis will be far-reaching in effect.

Apart from the use of x-ray in tomography, a novel application of it in the service of the physiology of phonetics was witnessed by me at the 2nd International Conference of Phonetic Sciences at Ghent in July last. Demonstrations by a German professor showed cinematographic use of x-ray, combined with articulation of sounds; it was, in fact, an x-ray talkie, in which every movement of the organs of speech inside the mouth and the throat was very clearly reproduced on the screen: this visualisation of lips, tongue, teeth, hard and soft palate, uvula and glottal cartilages and passages gives us a most convincing statement of what one does inside the mouth when one utters a particular sound. This new device has a very great future in the study of articulation, and in its application in other fields of medical science.

I have spoken about the modern type of buildings for hospitals. This, of course, we can have in India, as the needs of the country for the more and better hospitals are gradually met. In Europe, each hospital has a number of independent sections—complete units by themselves; specialisation has brought it about The most striking thing about the continental hospitals is their perfect organisation, which enables efficient team work to function properly. As an Indian and a foreigner, it has been my general impression that the atmosphere about the continental hospitals is that of greater progress. There is an all round desire for general improvement. Continental hospitals appear to give far greater facilities to foreign students (including those from India) than British hospitals. This is due to several reasons. There is that British conservatism and indifference, combined with some sort of imperialistic complex, from which continental hospitals are as yet free. At the same time, it would not be fair if I do not tell you about the deeper side of the British character. It is a well known experience to many of you that a Britisher has a thick skull. It is hard to hit and is still harder to bore a hole, but once you screw a thing in, it is bound to stay and that very firmly.

It is regrettable that although there are greater facilities for work, so very few Indian students go to continental hospitals. The reason is not far to seek. It is only the better class of Indian medical students, *viz.*, the more advanced who would venture to go to some centre of learning or science like Berlin, Vienna or Paris, which would also involve the proper acquisition of a continental language like German or French.

I come back with a great feeling of humility at the inadequacy of our hospital service in India, both

in quality and quantity. India has produced eminent physicians, surgeons and gynæcologists; and is it too much to hope that, with the Government and public bodies like municipalities and district boards becoming more alive to the sense of their responsibilities in this matter, and above all to the sense of identification with the suffering cause of the public, bigger, and better and more numerous hospitals, affording also room for experimentation, invention and discovery, can be expected?

In their mentality and their actions, in their ideology and their methods of work, men are the results of forces, which are being constantly exerted on their being and their environment by Nature, by history and tradition and by their inherited racial tendencies. But above all, education is a great factor. Whether a people will be speculative or active, is the result, no doubt, of the above forces. But everywhere there should be an attempt to bring about as perfect a harmony as possible between the speculative and active tendencies. In this matter, the responsibilities of the State cannot be exaggerated or over-emphasised. Where a State is identified with the people, as for example, in Japan and in the countries of Europe, phenomenal progress is a matter of course. Under the tutelage of the State, national deficiencies in mentality and activity are mitigated by training and descipline, going hand-in-hand with a just and equitable distribution of the national resources. What can happen when a nation is in such a fortunate situation I witnesed, above all, in a country like Czechoslovakia. This land, with not even a quarter of a century's tradition of freedom, has been able to accomplish marvels in the domain of medical relief, organisation and research. Compared with India and its vast resources and its enormous population, Czechoslovakia has twenty times as much accomplished work to show in the department of medicine and hygiene. The first class hospitals like the Commune Hospital, the magnificent State Institute of Hygiene and the unique Masaryk Home accommodating over 3000 invalids in Prague alone, bear eloquent testimony to what even a small nation, where the State and the people are one, can achieve in humanitarian work. It would be absurd, considering the general apathy and the evil distribution of public funds in India, to compare our country with Czechoslovokia. Recent medical statistics will brand the Indian administration as being the least effcient or the least equitable in the matter of the safeguarding of public health. A civilised Government in India spends hardly two annas per capita per annum for medical relief and over 50% of this paltry sum goes to pay the cost of a top-heavy medical administration. There are 8000 maternity beds in hospitals throughout the whole of India with its population of 350 million: every year over one and a half lac of expectant mothers die of childbirth, out of which 80% cases are preventable deaths. An equal number, if not more, die every year of tuberculosis: and over one million and a half die, and die prematurely, of malaria, kalazar, cholera and plague. Our national conscience and conscience of our administrators, should be roused by a study of these staggering figures which disclose a harrowing tale: and before we can dream of ideal hospitals, such as are the pride of modern civilisation, we should have more and better hospitals in India, and more money from public funds must be diverted to medical relief and sanitation, and to medical research.*

*A lecture at the Rotary Club Meeting on the 22nd Nov., 1938.

ASSOCIATION NOTES

Minutes or proceedings of Branches and Affiliated Societies intended for publication should be sent to the General Secretary of the I. M. A., Samavaya Mansions, Calcutta—EDITOR.

BARISAL MEDICAL UNION

At a meeting of the members of Barisal Medical Union held on 24th November, 1938, with Dr. J. N. Sen, L.M.S., in the chair, the following resolution was adopted.

Resolved that this meeting of the members of the Barisal Medical Union, is of the opinion that the Insurance Companies which have reduced the medical fees, either of the Licentiates or of the Graduates or of both, and which have not yet reconsidered their decisions in spite of the unanimous protest from the Union, have forfeited the sympathy of the medical profession.

Be it further resolved that the members of this Union shall not in future examine any case on behalf of such companies, and that the members shall forthwith resign their medical examinerships of such companies.

The resolution to take effect from the 25th November, 1938.

S. C. ROY,
Hony. Secretary.

FARIDPUR MEDICAL ASSOCIATION

The following resolutions were adopted at a general meeting of the Faridpur Branch of the Indian Indian Medical Association held on 30-10-38.

Considered the letter of the Hony. General Secretary, Indian Medical Association, dated 15-10-38 regarding the notice of Captain H. N. Shivapuri of Jhansi to move the following amendments and resolved that the Faridpur Medical Association supports the amendment.

Proposed amendments: (i) In rule 15D(e) at page 21 please add words "or branch" after the word "member" in the last line.

(ii) Add a new Sub-clause 15D(j) after the sub-clause 15D(i) on page 22 as follows:—

"The decision of the Central Council in all matters not covered by these rules, is final."

Resolved further that copy of this resolution be sent to the Hony. General Secretary, Indian Medical Association, for information.

Considered the proceedings of the 46th meeting of the Central Council of the Indian Medical Association held at 36, Wellington Street, Calcutta, on 22-9-38 regarding the scale of medical examination fees paid by Insurance Companies.

Resolved that as the matter has been taken by the Central Council and as there is a talk of an amicable settlement this Association thinks it proper at the present moment to keep our resolution No. 2(a) of the General Meeting held on 21-6-38, in abeyance till the final decision of the Central Council.

Resolved further that copies of this resolution be sent to the Central Council and Bengal Provincial Branch of the Indian Medical Association for information.

S. GHOSH,
Hony. Secretary.

JUBBULPORE MEDICAL ASSOCIATION

REPORT FOR THE YEAR ENDING 30TH SEPTEMBER, 1938.

President—Dr. George DaSilva.

Vice-Presidents—Dr. G. N. Harshe and Dr. Amir Khan.

Secretary—Dr. G. G. Subhedar.

Representative to the Central Council—Dr. DaSilva.

Number of members at the beginning of the year—19.

Number of members at the end of the year—20.

Number of new members enrolled during the year—6.

ACTIVITIES OF THE BRANCH

Number of meetings held by—

Executive committee	...	nil
Special meeting (Cholera during Epidemic)	...	1
General meetings	...	7

The audited accounts show a balance of Rs. 437-12-10.

* * *

The following have been elected office-bearers for the year 1938-39:

President—Dr. George DaSilva.

Vice-Presidents—Dr. G. N. Harshe, Dr. Amir Khan.

Secretary—Dr. G. G. Subhedar.

* * *

The Association records its emphatic protests against the action of the Insurance Companies in lowering the scale of examination fees. In the opinion of this Association the minimum fee should not be less than Rs. 8/- for one thousand and requests the Indian Medical Association to move in this matter.

G. G. SUBHEDAR,
Secretary.

RAWALPINDI BRANCH

REPORT FOR THE YEAR 1937-1938.

The last year closed on the 30th October, 1937, when the annual meeting was held after hard work of the Provincial Medical Conference organised by you here, and thus the Association launched into its second year in November and including to-day's meeting twelve meetings in all have been held. All the meetings were accompanied by scientific papers and at times guests were invited both locally and from outside to address at these meetings. The Nutrition talkie film was also shown in a local cinema hall both to the public and the members of the medical profession in Pindi including members and non-members The following is a short summary of the meetings held:—

November, 1937—Talkie film as above mentioned was shown in the local Rose Cinema. The President, Municipal Committee, very kindly presided. Two shows were given, and the house was full on each occasion. There was a further demand on the film but on account of its being required back by the Director, Coonoor Laboratory at Delhi, it had to be returned.

December, 1937—Dr. Sarwan Singh was invited from Lahore. He read an interesting paper on Wassermann reaction in the Gordon College Hall. All the members of the medical profession were invited to attend.

January, 1938—Dr. Balwant Singh of District Laboratory, Rawalpindi, read a paper on "Agglutination reactions in various diseases" at the residence of Dr. Harnam Singh.

February, 1938—A meeting followed by dinner was held in the Plaza restaurant, which was open to all members of the medical profession. Col. M. L. Puri very kindly presided, and Dr. B. L. Kapoor of the Maternity Hospital, Lahore, delivered an instructive lecture on "Urinary complications in pregnancy and puerperium." An appeal was made by Dr. Kapoor, and by the Secretary to the audience to join the I. M. A.

March, 1938—Capt. Walters, I.M.S. of the Indian Military Hospital, Rawalpindi was invited to address on "Early diagnosis and treatment of pulmonary tuberculosis" in the King George's Tuberculosis Hospital. The place was specially chosen for the purpose on account of the subject as well as to create an antecedent to bring the private and the hospital practitioners in closer association. Col. M. L. Puri, Civil Surgeon, who very kindly gave permission for the meeting to be held in the hospital premises was proposed to the chair. Col. Smith, Officer Commanding of the Indian Military Hospital, who was present at the meeting invited the I. M. A. to hold their next meeting in the I. M. H. but on account of his sudden illness on the fixed day for the meeting in April, it had to be postponed. Tea was served at the end of the meeting.

June, 1938—The meeting was held at the clinic of Dr. R. K. Handa when Dr. D. S. Bhalla read some journal extracts on intravenous therapy.

July, 1938—The meeting was held at the dispensary of Dr. A. N. Malhotra. Dr. S. D. Vania read a paper on "Treatment of Asthma".

August, 1938—Meeting held at the residence of Dr. Kirtar Singh Tibb, when Dr. B. R. Bakshi read a paper on "A Case of Urticaria".

September, 1938—Meeting held at the residence of Dr. Jeevan Singh. On account of the heavy agenda and the electric lights getting out of order Dr. J. N. Chadda could not read his paper on Pneumonia, and thus unavoidably it had to be postponed.

All the meetings were accompanied with either light refreshments, dinner or tea. Attendance at the meetings was always quite fair, although there is still great room for improvement on that score, only one meeting had to be adjourned for want of quorum.

OTHER ACTIVITIES—Efforts at a library, though repeatedly made, have so far not materialised, but I am sure difficulties will be surmounted and opinion of the members is already gaining ground, in the direction of a library. Let me hope that members will give a practical shape in near future to their already growing conviction for this necessity. The executive committee are making efforts to secure premises for the Association, but at the present stage, it would be premature to say anything more about it.

Medical Ethics—Copies of the code of the medical ethics and the warning notice extract from the Punjab Medical Council Acts cyclotyped were circulated to all the members at the expense of the Association to keep fresh professional etiquette in the minds of the members. Some members individually have several times pointed out the breach of ethics noticed, may be prehaps in ignorance and it was thought fit to acquaint the members thoroughly with what the dignity of the profession, the registration and convocation pledges expected of them.

Towards Unity—The resolution on the observance of half holiday on the last Saturday was passed unanimously and here I must point out that one of the members although was in a difficult position to which all agreed yielded to abide by the decision yet there is another who with special permission had it altered to the last Sunday for himself. Gentlemen, even in this exception the force of discipline is there.

Other important resolutions passed during the year are protests against Insurance Association in reducing the insurance medical examiners' fees, against the Minister for education, Punjab, for using objectional words in the Punjab Assembly against members of the medical profession, against Indian Medical Council on Anti-Council day, in sympathy with the Licentiates against pharmaceutical and other medical firms for employing non-medical men as their agents. A resolution appealing to the Licentiates' Association to join hands with the I. M. A. was also passed. The Organising Secretary has added a new branch by his efforts at Abbottabad. He is in correspondence with various medical men in other places and hopes his efforts will result in the formation of new branches in due course of time.

On viewing the above, gentlemen, the Association has definitely moved a step forward, and I have to remark with fair amount of satisfaction and pleasure that germs of unity and co-operation are already sewn amongst its members and although our speed is slow, it is not quite inconsistent with the age of the Association, which is only two years. Even if we can continue at this speed our momentum will increase as time passes, and things will go on more speedily with less effort, the only thing needed being perseverance and spirits. A healthy feature throughout has been that after full discussions and debates on whatever points have come forward for consideration these have been ultimately passed unanimously, a convention members have always kept in mind so that the whole organisation is above any dissensions or party feelings.

Relations to the Provincial Council—The Association has always promptly responded to the activities originating from the Provincial Council, although there has been delay sometimes in correspondence due to unavoidable circumstances. The suggestions for evidence on behalf of the I. M. A. before the unemployment committee and opinions as regards the amendment of the Punjab Medical Council Acts were comprehensively framed and submitted to the Provincial Council. As regards the Central Council the Association has as far as possible communicated with the same through the Provincial Council.

Membership—At the beginning of the year the number was 41 and though some of the members have left the station the number still stands at 39. Some suburban members though not always able to take part in the meetings of the Association have evinced

keen interest in the affairs of the Association and our Organising Secretary, has always kept close contact with these members and keenly looked after their interests. There have been no resignations except on account of unavoidable circumstances, *i.e.*, mostly leaving station.

Subscriptions—The collection of subscription though much easier than in the past year still leaves room for improvement. The subscriptions no doubt are fully realised but the delay caused in payment is always worrysome to the executive and the latter have off and on to go round for collection. I repeat here my last year's request to the members that they should please save the executive committee this extra amount of work and pay the subscriptions regularly so that the time spent in this way may be spent in some other direction for the benefit of the Association. Let me hope that the members will have regard for the consecutive appeals of the executive in this direction, and thus facilitate their work and at the same time save the Association from the least possible danger of disrepute since the accounts of the Association have to be submitted to the Central Council and the same in return are published in the widely circulated Journal of the I. M. A.

Accounts—Regarding accounts I shall only remark that the finances of the Association are in a better position than we started this year.

Executive Committee—The executive committee held 7 meetings in all during the year, although members have been meeting from time to time individually whenever any matters regarding the Association required their consideration. I, on behalf of the executive committee, thank you for the co-operation you have always extended to the committee and confidence reposed in endorsing decisions of the committee at the general meetings without dissension. The executive committee, I assure you, have always done what they think best in the interests of the Association, and in matters which were controversial they always left for the house to decide. The executive committee have always done their best to enlist the co-operation of the medical practitioners in general in all matters affecting the profession as a whole. In fact, the resolution aiming at protest against the reduced Insurance medical fees, is already in circulation to all medical men and women in Pindi for opinion even just now.

Lastly, gentlemen, I thank the President, the members of the executive committee, and the rest of you for the help you have rendered me from time to time to carry on the work of the Association and for the guidance I have received from you whenever I was in need of advice and consultation. Believe me, I appreciate it gratefully for after all there is no doubt, that it is not the individual, but the union that counts, but without the individuals there could not be a union. I thank you once more. Finally, a bird's eye view of the above clearly shows that we as members of a unit have made the beginning of a revolution by changing howsoever little the old routine of conservatism amongst medical men by social gatherings, by exchanging professional views, by fighting external averse forces, and by improvement from within.

It is an encouraging record indeed, and with courage we must go ahead with the motto excelsior.

R. SURI,
Hony. Secretary

* * *

The following office-bearers were elected for the year 1938-39:

President—Capt. S D. Vania, L.R.C.P. & S. (Edin.), L.R.F.P. & S. (Glas.), I.M.S. (Retd.).

Vice-President—Dr. McAwley, M.O. Leper Asylam, Rawalpindi.

Hony. Secretary—Dr. R. C. Suri, M.B., M.R.C.S. (Lond.), D.Ph., D.T.M. (Lond.).

Joint Secretary—Dr. Maohar Lal Nanda, M.B.B.S.

Treasurer—Dr. Jaswant Singh, L.M.P.

Members of the Executive Committee— Drs. Diwan Singh Bhalla, M.B.B.S. and Pritam Singh, L.M.P.

S. D. VANIA,
President.

ROORKEE BRANCH

The third meeting of the Roorkee Branch was held in the Civil Hospital, Roorkee, on 3rd September, 1938, at 5-30 p.m. Dr. K. N. H. Rizvi, M.B.,B.S., was proposed and voted to the chair until the arrival

of the President, Lt.-Col. G. B. Hanna, I.M.S., O.B.E., Civil Surgeon, Roorkee, who could not come earlier than 5-45 p.m. on account of certain unavoidable circumstances. The minutes of the last meeting were read by the Secretary and confirmed duly. Next the resolution of the Rajbari and Faridpur Branches about the reduction in medical fees was considered and discussed and the necessity of a united front on the part of medical examiners was urged and the following resolution was unanimously passed:—

That the Indian Medical Association be requested to take up the matter and the fees fixed thereby be abided by every Branch. Then a paper on Digestive Disturbances was read by Dr. Garg. Every member took part in the discussion and the President pointed out two important features, *viz.*, the condition of the patient's mouth as regards the incidence of pyorrhœa or some other infection and the necessity of marking out the boundary of the stomach by giving some effervescent draughts.

Next five interesting cases of anxiety-neurosis and of neurasthenia were demonstrated by Dr. Rizvi and one by Dr. Garg. A case of gangrene of the finger due to ligature in a case of scorpion bite was demonstrated by Dr. R. C. Srivastava.

With a vote of thanks to the chair the meeting came to a close and was followed by an At Home which was kindly arranged by Dr. K. N. H. Rizvi and was enjoyed by all.

* * *

The fourth meeting of Roorkee Branch was held in the Civil Hospital, Roorkee, on 31st October, 1938, at 4-30 p.m. under the Presidentship of Lt.-Col. G. B. Hanna, I.M.S., O.B.E., Civil Surgeon, Roorkee.

The minutes of the last meeting were read by the Secretary and duly confirmed.

The copies of the letters from the Dean, Faculty of Medicine, Lucknow University and from the Principal, Agra Medical School to the I. G. Civil Hospitals, U. P., regarding the special and refresher courses were read and duly considered and it was resolved that in the opinion of this Branch the period suggested took long and no private practitioner can afford to be absent for so long a time and the fees prescribed are also heavy. A time limit of about three weeks and a fee of Rs. 50 is suggested.

Next the Health Insurance Scheme prepared by a doctor in Madras was considered. It was resolved that an act of this nature is a necessity but the amount of fees suggested is too low.

After this, some useful suggestions were given by the President and with a vote of thanks to the chair the meeting came to a close.

R. C. Srivastava,
Hony. Secretary.

SHOLAPUR BRANCH

Report for the Year 1937-38

President—Dr. R. C. Thanawalla, M.B., B.S.

Vice-President—Dr. K. B. Antrolikar, M.B., B.S.

Secretaries—Dr. S. D. Dikshit, L.C.P.S. and Dr. J. N. Godbole, M.B., B.S.

Number of members on the roll at the beginning of the year—32.

Number of members on the roll at the end of the year—40.

Number of members left—7.

Number of new members joined—15.

Number of meetings held—4.

Number of clinical meetings held—1.

The names of the doctors who read papers at the above meetings and their subjects are as under:—

1 Dr. Subramanyam—Public Health and Social Hygiene especially affecting the city of Sholapur.

2. Capt. Smithwick—Anæmia.

3. Dr. Karmarkar—Impressions in England.

4. Dr. Santra—Leprosy.

5. Dr. B. V. Mulay—Demonstration of interesting cases.

Number of periodicals subscribed:—(1) Practitioner; (2) Medical Press and Circular; (3) Indian Medical Gazette; (4) Antiseptic and (5) Medical Bulletin.

Special activity during the year—Medical examination of Municipal school children.

R. C. Thanawalla,
President.

TINNEVELLY DISTRICT MEDICAL ASSOCIATION

TENTH ANNIVERSARY

The Tenth Annual Gathering organised by the Tinnevelly District Medical Association commenced at 4-30 p.m. on Saturday, the 3rd of December, 1938, in the Subrahmanya Karayalar Public Library, Palamcottah. Members numbering 75, including 7 women doctors were present. Two members of the Independent Medical Practitioners' Association, Tinnevelly, also attended the function.

After tea party and music the business meeting commenced at 5-30 p.m. under the presidentship of Lieut-Col. T. S. Shastry, I.M.S. The Secretary Dr. K. Rama Ayyar, M.B., B.S., (Andhra), read the minutes of the last monthly meeting and also the minutes of the special meeting.

Then the election of office-bearers was proceeded with.

President—Lieut-Col. T. S. Shastry, I.M.S.

Vice-President—Dr. T. N. Govinda Iyer, M.B. & C.M.

Secretary and Treasurer—Dr. K. Rama Ayyar, M.B., B.S. (Andhra).

For Women Members—Dr. Mrs. E. Bernard Carr.

For the General Body—Dr. L. Mahadevan, M.B., B.S. (Madras), D.O.M.S. (Lond.). Dr. N. Isaac, Retired Selection Grade Sub-Assistant Surgeon, and Dr. K. S. Subrahmanyam, L.M. & S.

Member-Auditor—Dr. K. V. Muthiah Pillai, L.M. & S.

Resolved that the following be the programme of meetings for the year 1939:

1. January—Nanguneri (Temple).
2. February—Headquarters.
3. March—Tiruchendur (Sea Side).
4. April—Headquarters.
5. May—Srivaikuntem (Temple).
6. June—Papanasam (Waterfalls) Ambasamudram.
7. July—Courtallam (Waterfalls).
8. August—Headquarters (President's Function).
9. September—Sankarankeil (Temple).
10. October—Hearquarters (Anniversary).
11. November—Koilpatti (Mills).
12. December—Headquarters.

The following resolutions were passed unanimously.

1. Amending Rule No. 19 as follows:—

   To have the power to alter the constitution at any one of its meetings after previous notice has been given where not less than one half of the number of members on the roll are present and three-fourths of the number present are in favour of the proposed change in the constitution.

NEW RULES

2. Members whose subscription is in arrears for six months shall cease to be members, but they continue to be liable to pay the arrears.

3. Members who have lost their membership under the bye-law shall not be readmitted unless they pay all the arrears due from them.

4. A non-residential membership shall be instituted as follows:—

   (1) It is resolved that the Association may institute a non-residential membership for the benefit of those members of our Association who get transferred or who have to move out of our District in the course of the Journal Year (1st of October, to 30th of September following).

   (2) This non-residential membership applies only to such members as are residing and working in a District which has no branch of the Indian Medical Association.

   (3) It is proposed that the annual subscription for the non-residential members should be Rupee one for the membership plus a Journal subscription of Rupees three per annum for the Journal. But since he has already paid Rupee one towards the Journal he should pay only Rupees two for it for the current year.

(4) Before he leaves the district he should pay the subscription and other dues due to the Association; and when he applies for non-residential membership he should pay in advance the subscription of Rupees three for the current year.

(5) For the next year onwards he should pay Rupees four in advance. If it is not paid in advance his name shall be removed from the list.

(6) His applications should be accepted by the Managing Committee and he should be enrolled as a non-residential member before, he gets the benefit of it, and the Secretary of the Indian Medical Association, Calcutta, should then be informed to continue to send the Journal to such a member to his new address.

5. The "Association Year" shall be from the 1st of October to 30th of September following to come into line with the Indian Medical Association.

Then Lieut.-Col. T. S. Shastry, I.M.S., offered a hearty welcome to all the members and guests.

ANNUAL RE-UNION

Lieut.-Col. T. S. Shastry, I.M.S., opened the proceedings of the Conference as the Chairman of the Re-union.

Dr. K. Rama Ayyar, M.B., B.S., (Andhra), read out the messages of Good Wishes for the success of the Conference received from the following:—

1. The Hon'ble Dr. T. S. S. Rajan, L.R.C.P., M.R.C.S., etc., Minister-in-charge of Medicine and Public Health.

2. Rao Bahadur C. B. Rama Rao, M.D., Bangalore.

3. Dr. K. Raman Tampi, M.D., President, The Travancore Medical Association, Trivandrum.

4. Dr. P. Rama Rau, Radiologist, Madras.

5. Dr. Noble, M.D., F.A.C.S., Nagercoil.

6. Dr. K. R. Menon, L.M. & S., President, The Malabar District Medical Association.

7. Dr. D. V. Venkappa, Madras, President-elect of the All-India Licentiates Medical Practitioners' Association.

8. Rao Bahadur T. S. Tirumurti, B.A., M.B. & C.M., D.T.M. & H. (London), Principal, Stanley Medical College, Madras.

9. Telegram from Dr. U. Krishna Rau, Joint Secretary, The Indian Medical Association.

10. Telegram from Dr. P. S. Srinivasan, Dhanushkodi.

Dr. M. Venkatachalam Chetty, Sub-Assistant Surgeon, read out the following interesting clinical cases which were successfully treated and operated at the Government Headquarters Hospital, Palamcottah:

(1) A case of tumour (right shoulder) (not operated).
(2) A case of perforating wound abdomen.
(3) A case of undescended testis (left side).
(4) A case of traumatic dislocation hip (left side).

Dr. Mrs. A. Brown, Woman Apothepary of the Government Women and Children Hospital, Vannarpet, read out a case of tumour on the left side of the neck.

A discussion of these cases followed, the Chairman of the Re-union contributing to the discussion and elucidating the therapeutics of the cases.

The grand banquet was brought to a happy close at 11 p.m. after a grand dinner party.

K. RAMA AYYAR,
Secretary and Treasurer.

BAREILLY BRANCH

A general meeting of the Bareilly Branch of the Indian Medical Association was held on 6-12-38 at the residence of Dr. N. Pershad, M.B., B.S. The following office-bearers of the Executive Committee were elected with powers to co-opt any more members for the year 1939:—

President—Dr. S. G. Gurha, L.M.S. (Retd. Civil Surgeon).

Vice-President—Dr. C. M. Aga, M.B., B.S., D.M.O., R. K. Railway.

Secretary—Dr. B. K. Saxena, M.B., B.S.

Treasurer—Dr. B. K. Mukerjee, L.M.S.

Members—Dr. N. Pershad, M.B., B.S. and Dr. V. S. Trivedi, L.R.C.P. & S.

B. K. SAXENA,
Secretary.

MEDICAL NOTES AND NEWS

RESEARCH OR PROPAGANDA

Two important speeches, one by Sir Jagdish Prasad and the other by General Bradfield, were delivered on Monday, the 12th December, 1938, at the opening of the Medical Research Workers' Conference at Delhi. India has a very unenviable reputation as the chief home of infectious diseases and malnutrition. The provision of about seven lakhs of rupees for the annual requirements of medical research of nearly 400 million people is a mockery. That of this sum, the Government of India pays only a lakh and a half of rupees further aggravates this mockery. The Education Member referred with satisfaction to the Research organization being staffed mainly by Indians. He was probably unaware of the fact that the vast majority of his compatriots belonging to his organization were mere fags and that credit for the work done by them was really enjoyed in scientific publications by European directors of inquiries and a few Indians, mainly members of the I.M.S. contingent. Careful examination of what passes for medical research in India reveals that much of it is a camouflaged variety of public health propaganda. It is calculated more to advance the reputation of the Government for benevolence than for a scientific solution of the problems of disease which confront this country. Concentration on propaganda represents an easier line of action than research. The latter shuns the lime-light, the former courts it.

Of all diseases malaria constitutes the biggest scourge in India. The conquest of this disease was achieved nearly forty years ago and most countries which had the will, had successfully eradicated the disease through the application of the results of scientific research. In India, however, even the protection of the Imperial Capital against malaria constitutes a research activity. The expenses connected with it are a charge on the Indian Research Fund Association and drain substantially the slender financial resources of that body. What is true of malaria applies also to the so-called section of Nutrition Research. Compilation of pamphlets on the nutritive values of foods from published literature and the issuing of propaganda bulletins—legitimate routine functions of Public Health organizations—pass for research work in this field in India. Products not indigenous to the country at present, like dried skimmed milk and red-palm oil are boosted in a manner hardly scientific.

General Bradfield's speech also amounted to an admission of the failure of cholera work in India. The epidemic spread of the disease in the country following the last Kumbh fair was a sad commentary on decades of research work done and its preventive applications. The Indian Research Fund Association must have invested about twenty lakhs of rupees on research in this field. It is easy to put the blame on to the ignorance, poverty and social conditions of our people and ignore the greater challenge to scientific effort which these conditions constitute. These considerations apply practically to all the major inquiries sponsored by the Indian Research Fund Association. The greatest weakness of the organization is its carrying a permanent directing personnel.

—*Hindustan Times.*

U. P. GOVERNMENT BILL TO HELP INDIGENOUS SYSTEM OF MEDICINE

To reconstitute the Board of Indian Medicine, to give it a statutory constitution representative of experts and responsible public men and to invest it with wider powers and funds for the development of the indigenous systems along progressive lines, to register qualified vaidyas and hakims conferring on them due status, and to regulate the practice of Indian medicine with a view to arrest the growth of quackery, the Government of the United Provinces have drafted the U. P. Indian Medicine Bill, 1938, which will shortly come before the U. P. Legislative Assembly.

Hon'ble Mrs. Vijaya Lakshmi Pandit, Minister for Local Self-Government, in the statement of objects and reasons, states:—

"There has of late been a persistent demand for recognition, development and expansion of the two systems of Indian medicine by the Provincial Govern-

ment. Under none too encouraging conditions hitherto they have not only managed to remain popular, but have supplied medical relief to the bulk of the population in the province on account of the cheapness of their drugs and their suitability to Indian conditions.

"Some assistance was given to these systems in the past few years by way of grants and a Board of Indian Medicine was constituted to encourage and develop them along modern lines. The activities of the board resulted in the establishment and development of some institutions and in improving the quality of their work and the outlook of indigenous medical practitioners. It is now generally recognized that no scheme of public health of medical relief can rest on sure foundations and embrace every village in the province, unless it fits in with the culture and outlook of the people and suits their physical, mental and economic conditions. At the same time it is also felt that no systems of medicine, however popular they might be, can survive for long or prove beneficial, unless they keep pace with the times, and are capable of meeting the needs of changing conditions.

"The funds placed at the disposal of the Board of Indian Medicine, and the latter's constitution and powers are not adequate to achieve the objectives in view while the status given to qualified medical practitioners, even after registration, is not sufficient either to attract talented persons or to exercise effective control over quackery."—*A. P. I.*

AN INTERESTING EXPERIMENT

Details are given, by Mr. C. E. M. Joad, of the three-year old Public Health Centre at Peckham in the current issue of *The New Statesman*. It is an experiment in public health maintenance practice to which, it may be recalled, we drew attention recently. The Centre exists to provide health services to the families in the neighbourhood. To-day, we are told, 600 families are members of the Centre. Each family pays 1 sh. a week irrespective of its size; and, in return, the Centre subjects each member of the family to a thorough medical overhaul which will be repeated every year. The Centre does not treat the members, save for minor complaints, but makes a report to the member's own doctor. Those responsible for the Centre have primarily two objects in view—one practical and the other theoretical. From the practical point of view, the Health Centre records the preclinical condition of its members. Though there may be nothing seriously wrong with us, most of us often feel there is something wrong, some indefinable discomfort. The examination made at the Health Centre enables the doctors to establish what the matter is with the members—what, in fact, that indefinable *malaise* is. "It might be", Mr. Joad points out, "flat feet, bad teeth, incipient anæmia, latent heart trouble, varicose veins, potential high blood pressure—but if left untreated it would have grown worse." The Peckham experiment showed that 83 per cent. of those examined had some abnormality or other in the first year of examination and that in the year following, some 23 per cent of those previously found to be suffering from an ailment had been cured of their ailment as a result of timely attention. Regarding the second object of the Centre, theoretical study, the staff of the Centre, we are told, "think of themselves as entomologists inspecting an ant heap." They do not give any guidance to the members; indeed they refuse to give advice. In the first year, it would appear, the members were advised to go to their doctor and but 35 per cent of them took the advice. In the year following, the members were simply told the results of the overhaul "for purposes of information only" and the result was that 90 per cent. acted upon the report and resorted to medical treatment, thus establishing the proposition that "everybody hates being given advice and that people show their hatred when they can by refusing to take it." The Peckham experiment thus appears to have been tried sufficiently long to be deemed satisfactory. —*Hindu.*

THE STATE AND MEDICAL RESEARCH

Sir Edward Mellanby, Secretary of the Medical Research Council, delivered the Harveian oration at the Royal College of Physicians on "The State and Medical Research". He said that private endowment of research had no proud history in this country, although there had been fine exceptions in the case of medicine. As to government support, it took a great war to make the government set up the Department of Scientific and Industrial Research in 1915. The Medical Research Committee was originated in 1913 in connection with the national health insurance act. This arrangement was terminated in 1919, and the

Medical Research Council received its present title and constitution in 1920. It is financed with money provided by the government. During the present century there have been two rapid increases in medical research activity, running side by side: the one in this country, organized and to a large extent financed by the state, the other in the United States, richly endowed and controlled by private interests. Each had already produced a good harvest. The recent Nuffield scheme started at Oxford, was possibly an indication that private persons would in the future regard the endowment of research here as more worthy of their support. The most limiting factor in all research activity, but especially in medical research, was personnel. The number of people who were trained for, and capable of, doing work of this type was not large. By various means the Council was trying to increase their number.

Speaking of the work of the National Institute for Medical Research, Mellanby said that it had always reached the highest standard. One aspect of it of particular interest to the physician was the biologic standardization of drugs. In this the Institute led the world and had rendered a great service to mankind. Another line of policy was the placing of units of research in different institutions, and this had shown great development in recent years. Short of a catastrophic change, which might upset or even destroy national life, the future was bright. There was no doubt that more and more knowledge, giving control, both preventive and curative, of disease would be obtained. The difficulty he foresaw was not that of obtaining knowledge but of its application to human needs. This would depend on the education and wisdom of individuals. Without an enlightened public opinion the average person would do nothing to save himself, and the state would do less. There was a shocking neglect in this country of using the available knowledge for the prevention of diphtheria.

—*J. A. M. A.*

NEW INTERNATIONAL STANDARD FOR VITAMIN B_1

It is announced that the first international standard for vitamin B_1, which consisted of an adsorbate of the antineuritic vitamin, made from rice polishings, on fuller's earth, has now been replaced by a preparation of crystalline vitamin B_1 hydrochloride. In recent years progress in the study of the antineuritic vitamin has been rapid, and this change in the form of the international standard has been made possible by the synthetic preparation of the vitamin in pure crystalline form.

Through the generosity of four manufacturers, an adequate quantity of the new crystalline material was placed at the disposal of the National Institute for Medical Research, Hampstead, to enable a new standard to be prepared consisting of the pure crystalline substance. Extensive international investigations of the properties of this material and, in particular, the determination of its potency in terms of the original international standard by a variety of methods have now been completed, and the members of the International Conference on Vitamin Standardisation have unanimously recommended that the sample be adopted as the Second International Standard for Vitamin B_1, and that the international unit be defined as the antineuritic activity of 3 microgrammes of the international standard preparation. This recommendation has been adopted by the permanent commission on biological standardisation of the Health Organisation of the League of Nations.

As in the case of the other international vitamin standards, the new standard for vitamin B_1 is held, on behalf of the Health Organisation of the League of Nations, at the National Institute for Medical Research, and is distributed therefrom to national control centres established in other countries for local distribution to laboratories, institutes, and research workers; and to workers resident in countries in which the establishment of national control centres has not yet been completed.

With regard to the supply of the new standard for vitamin B_1 to those requiring it in the United Kingdom, samples have already been sent to the laboratories, institutes, and research workers who have hitherto received the standard adsorption product. Others requiring the standard are asked to make application to the Department of Biological Standards, the National Institute for Medical Research, Hampstead, London, N. W. 3.—*Lancet.*

SUGAR AND THE TEETH

Dr. Wohinz discusses the inter-relation of sugar and the teeth in the Zahnarztlichen Mitteilungen.

Statistics have revealed the astonishing fact that Germany, although a large producer of beet sugar, ranks fifth among the nations as a consumer of sugar. The view that sugar damages the teeth is no longer tenable on the basis of recent observations. Laboratory experiments as well as observations *in vivo* show that raw sugar and even mixtures of raw sugar and fat (whipped cream, marchpane) and protein exert no corrosive effect on the dental enamel. The injurious effect of neutral yeasty bakery goods can be favorably offset or abolished by ingestion of fruits and vegetables or salads. Carbohydrate ingested in the form of sugar ferments not at all or only as lactic acid. On the contrary, carbohydrate decomposes if ingested in the form of starches; it is first decomposed into sugar by the oral secretions and then undergoes further changes which exert a more harmful influence on the dental enamel than lactic acid. Dental caries among bakers is a special instance; particles of flour and sugar are inhaled in the course of the work; these particles light on the front teeth, and the deposits on the upper jaw in particular are not carried away by the saliva. Workers in sugar are consistently free from sugar caries.—*J. A. M. A.*

TYPHOID MARY

The death is reported from New York of Miss Mary Mallon, a chronic typhoid carrier, famous as "Typhoid Mary". She reached the age of 70, living in a country cottage purchased for her by the State in 1923, and died from a paralytic seizure.

Suspicions that Miss Mallon was a carrier were aroused in 1904 when four fellow servants in the house where she was employed as a cook contracted typhoid fever. These suspicions were confirmed in 1907, when two members of another household for which she worked developed typhoid, one of the cases ending fatally. Actually outbreaks of typhoid fever occurring at varying periods after Miss Mallon's engagement as a cook are traceable as far back as 1900, and even then, as Ledingham and Arkwright (1912) have observed, the list compiled by G. A. Soper (1907) is probably not complete. It is noteworthy that Miss Mallon had been in her first place for three years before cases began to appear in the household. Subsequent household outbreaks in her employer's family or staff were traced in 1901, 1902, 1904, 1906 (twice), culminating in the 1907 incident, which resulted in Miss Mallon's forcible removal and isolation as a carrier for a number of years. It seems, however, that in 1914 she became a cook in a sanatorium and was again the source of an epidemic. After this she was isolated for nearly ten years, and then housed at the expense of the State. Miss Mallon was a fœcal, probably a biliary carrier. Typhoid bacilli, so far as is known, were never isolated from her urine. According to C. H. Browning and his collaborators (1933), probably 2 to 5 per cent. of all cases of typhoid fever become permanent carriers, and in countries where the disease is still comparatively common, as in the United States of America, they may constitute 0·1 per cent. or more of the total population. They are, of course, a constant source of danger to the community in which they live, especially when engaged in the handling of milk or other foodstuffs. In England and Wales medical officers of health have no power to do more than forbid carriers to engage in trades which involve the handling of foodstuffs, but it is clearly of the utmost importance to detect and, whenever possible, segregate enteric carriers while measures are adopted for their treatment. According to Browning, most of those who excrete enteric bacilli for as long as six months after the acute attack, will continue to do so, and those who still excrete them after a year will not be cured spontaneously and are to be regarded as permanent carriers. The successful treatment of the chronic carrier, whether biliary or urinary, has hitherto been surgical. So far drugs, vaccines, and physical therapy have proved unavailing. It remains to be seen whether the sulphanilamide group of drugs affect this distressing condition—*Lancet*.

THE DESTRUCTION OF MOSQUITOES CARRIED BY AEROPLANES

The possibility of aeroplanes introducing diseases into a country by carrying insect vectors from a place where it is rife must be provided against. Indeed, it has been stated that a new type of malaria was brought from Africa to Brazil in this way. There is now anxiety whether yellow fever, which has heretofore been confined to tropical America and Africa, will be transplanted to Asia. Imperial Airways maintains a research station in London, and experiments have been made there with a practically odorless and colorless vapor which is distilled from an English wild

flower, pyrethrum, specially cultivated for the purpose. About 200 mosquitoes, all potential vectors of disease, were supplied by the London School of Tropical Medicine. The liquid distillate from the pyrethrum was poured into an atomizer constructed for use in aircraft, which was used in a room of about twice the capacity of the imperial flying boats. In seven minutes about half the time during which the atomizer would be used on aircraft, all the insects were dead. The vapor is harmless to man but it will also kill the tsetse fly, the vector of trypanosomiasis. All countries through which Imperial Airways operates have regulations for preventing the carriage of disease by insects, but their regulations differ. It is hoped that international recognition of the method will be obtained—*J. A. M. A.*

ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION

The first general meeting of the Indian Division of the Royal Medico-Psychological Association will be held on 23rd and 24th January, 1939 at the Punjab Mental Hospital, Lahore, under the chairmanship of Lt.-Col. C. Lodge-Patch, M.C., I.M.S., Medical Superintendent. The Governments of India and Ceylon as well as the Provincial Governments of Assam, Bihar, Bombay, Central Provinces, North-West Frontier Province, Punjab and United Provinces have kindly agreed to grant members employed under them special leave and travelling expenses to attend the meetings triennially. The Government of Madras have sanctioned only the concession of special leave for one officer to be selected by the Surgeon-General. The Governments of Bengal, Orissa and Sind have no member working under them but are willing to consider the matter when necessary. Members who wish to avail themselves of the facilities granted by their respective Governments are to apply to them through the proper channel for permission to attend the meeting.

Dr. C. J. Thomas, an eminent member of the Association in England, is coming out to India and is expected to bring out some token of goodwill from London Head-Quarters to be personally presented to the new Indian Division at its first meeting at Lahore.

STRINGENT MEASURES FOR CONTROL OF DRUGS IN INDIA

Stringent measures are needed to deal with the chaotic situation in regard to the profession of pharmacy in India and to the manufacture, sale and import of drugs in the British Pharmacopœia as well as those which are 'known and approved'.

The report of the Drugs Enquiry Committee in 1930-31 drew attention to the ineffectiveness of existing legislation to control the drug industry and prevent the sale of impure, adulterated and misbranded pharmaceutical products.

Mere adulteration of drugs is not, by itself, prohibited throughout British India by any enactment. Apart from the commission of the offence of cheating, adulteration, which renders the drug 'noxious' or 'lessens the efficacy' or 'changes its operation', alone is controlled by the Indian Penal Code. Nor is the sale of a drug of insufficient strength or improper standard punishable otherwise than on the basis of misrepresentation and fraud. The non-existence of fixed standards or methods of analysis, the absence of any precise definition of adulteration, the difficulty of proof and the fact that intention or knowledge is of the essence of these offences, as well as of cheating, complicate the situation and render the provisions ineffective in practice.

In penalizing false marks and false trade descriptions, the Indian Merchandise Marks Act and the Sea Customs Act merely touch the fringe of the problem of misbranding which is hydra-headed. Strict proof of difference in the nature or quality of the goods or the falsity of the description is often beset with impediments. The Cantonments Act is also of limited scope and efficacy. The Indian Sale of Goods Act, 1930, which is merely concerned with obligations of a civil nature is also inefficacious in securing food and drugs of the opposite standard of strength, purity and quality.

As regards the profession of pharmacy, there are practically no restrictive laws of general application except certain perfunctory provisions in Municipal Acts of some of the provinces relating to the registration and licensing of retail shops and the employment of compounders.

VALUE OF INDIAN INDIGENOUS DRUGS

Only a very limited number of indigenous remedies deserve the reputation they have earned as cures and quite a large proportion of them are absolutely worthless and have probably crept in through tradition and folk-lore.

This is one of the results of an important research undertaken to investigate on scientific lines the claims of the rich materia medica of the Ayurvedic and Unani systems of medicine which was financed by the Indian Research Fund Association.

During the last twelve years this enquiry has done a considerable amount of work which has not only received local appreciation but international recognition. The Departments of Pharmacology and Chemistry of the School of Tropical Medicine, Calcutta are now considered an authority on all questions in connection with the chemistry, pharmacology and therapeutic uses of the Indian indigenous drugs.

It has been found that many of the pharmacopœial drugs or allied species grown in India which could be used in the manufacture of pharmacopœial preparations are in common use.

CO-ORDINATING MEDICAL AND PUBLIC HEALTH DEPARTMENTS

The activities of those responsible for medical relief and prevention of disease are so closely interrelated that it is impossible to draw any sharp distinction between them, and the consequent necessity for co-ordinating Government Medical and Public Health Departments is being increasingly felt.

The Central Board of Health at its first meeting passed a special resolution which stressed the need for co-operation between these two departments, and recognising the important position which prevention occupies in every phase of medical practice, both the Medical Council of India and the General Medical Council of Great Britain recommend that "throughout the whole period of study the attention of the student should be directed to the importance of the preventive aspects of medicine."

In most countries all branches of medicine are administered by one Health Ministry with separate higher directing staffs, but India is peculiar in the extent to which in some areas the activities of medical and public health departments have been separated or in a few cases even divorced from each other.

The prevention of diseases has come to be universally recognised as being the chief aim of medical work and most of the administrative medical officers are now enthusiastic advocates of disease prevention; indeed some of them have been specialists in public health for the greater part of their previous service. All of them state that they are prepared to co-operate with the Directors of Public Health and to insist on a similar co-operation on the part of the members of their staff.

This combination of effort does not mean the swallowing up of one department by another, but only that whenever it is in the interests of efficiency and economy, the medical men ought to engage both in medical relief and public health work.

While a satisfactory degree of liaison exists between the Directors of Medical and Public Health Departments, it is in the district, in the sphere of the Civil Surgeon and the District Health Officer that health presents its most important problems and where there is the greatest need of co-operation. Separate higher directing staffs technically qualified, co-ordinated by an administrative head, are essential for efficiency, but when we come down to smaller district units, such as the village dispensary, it is certain that India can never afford to maintain two experts for each small centre of her population.

As long as the ideal is unattainable for financial and other reasons, the most promising line to follow is that of the District Health Bureau recommended and outlined by the Central Health Board, on which the Civil Surgeon and the public health expert of equal standing can co-ordinate all their activities.

Further the dispensary doctor must be brought more intimately into the local health picture and his usefulness increased by improving the teaching of hygiene and public health in medical schools and colleges. In their knowledge of the people and the confidence in them, gained by frequent contact, the Civil Surgeon and the dispensary doctor are valuable assets which should be fully utilised.

OVERCROWDING IN INDIAN MENTAL HOSPITALS

Overcrowding, with its implications of growing hardship to the patients and increasing difficulties for

the institutions, is reported in India's mental hospitals. With increasing urbanisation and education there is a greater demand that these patients should be cared for and that institutional treatment for the indigent mental patients should be a charge on the State.

At present there are only 17 mental hospitals in British India, three in Madras Presidency, five in Bombay Presidency, three in the United Provinces, two in Bihar and one each in the Punjab, Central Provinces, Assam and Sind. The province of Bengal has arrangements by which its mentally defective patients are admitted to the mental hospitals in Bihar. There are no such hospitals in Orissa or the North-West Frontier Province.

Among States, Mysore has a mental hospital at Bangalore with accommodation for 183 males and 67 females, and Hyderabad has a small lunatic asylum in the Central Jail. A scheme for the construction of an up-to-date mental hospital has been sanctioned and the constructed work is to be started shortly.

In the 17 hospitals in British India there is accommodation for 8,425 patients, but the number of patients actually confined in these institutions in 1936 was 11,792 of which 8,930 were males and 2,862 females. There was overcrowding in almost all the hospitals, but it was more acute in Madras, Bombay and the United Provinces. The demand for admission in some hospitals was so great that even criminal insanes had to be lodged in jails where there was no satisfactory arrangement for treatment.

A greater part of the accommodation in the existing mental hospitals is occupied by incurable patients, and the only important advance made in recent years has been the organisation of psychiatric clinics at medical teaching institutions in Bombay, Bengal and the United Provinces. No such clinics exist in the Punjab, Bihar, Central Provinces and Berar, Assam, North West Frontier Province, Orissa, Baluchistan and Coorg. Funds are not available anywhere to provide adequate accommodation for mental patients, but whenever possible psychiatric clinics should be opened at the larger hospitals. Such clinics deal especially with the early curable cases and when combined with a Neurology clinic often produce the confidence which attracts patients.

Another pressing problem is the provision of separate institutions for the training of mentally defective children. In Madras a class of about 15 children, who were inmates of the Madras Mental Hospital, was formed in 1937 and instruction in sense training, simple story telling, picture drawing, etc., was given and facilities for excursions, outdoor games, amusements and certain simple cottage industries provided. In Bombay the training is given at the Byramjee Jeejeebhoy House for Children, Matunga, which is maintained by the Society for the Protection of Children in Western India. The children are taught on Montessori lines and the training includes classes on sewing, embroidery, raffia work and bread work. Mentally defective children in Bengal are treated at two private institutions.

No facilities for the training of such children exist in the United Provinces, Punjab, Bihar, Central Provinces and Berar, Assam, Sind, N. W. F. Province, Orissa, Baluchistan and Coorg.

Among the predisposing causes of insanity, judged from the conditions of admissions during 1936, were mental and moral stress, business and domestic worries, addiction to drugs and drinks, infections, previous attacks and hereditary predisposition. The largest number of cases were between the ages of 20 and 40. Out of a total of 11,798 cases of insanity in 1936, 839 were due to mental deficiency, 1,187 to maniacal depressive insanity, 1,949 to mania, 1,441 to melancholia and 2,195 to schizophrenia including dementia præcox.

THE DRUG CONTROL IN INDIA

The urgent need for proper drug standardization and for a comprehensive scheme of drug control has been painfully brought out by a recent investigation undertaken by the Biochemical Standardization Laboratory, Calcutta, into the liquid preparations of Ergot sold in the Indian market and in common use for medicinal purposes. The Laboratory, which was established by the Government of India in Calcutta in 1937, as a first step towards tightening of control over the manufacture, importation and distribution in the Indian market of drugs inferior in quality and spurious in character, has since its inception been engaged in an All-India survey of the quality of drugs. Some of the findings recorded in this Laboratory reveal a serious state of affairs regarding the quality

of Ergot preparations that are daily being used in India.

Chiefly used to stop post-partum hæmorrhage, an emergency condition where energetic treatment with fresh and potent Ergot preparations is essential to save the life of a mother, the poor quality of Liquid Extract of Ergot which is the commonest preparation employed in hospitals and private obstetrical practice in India constitutes, therefore, a grave menace to maternal health, and is possibily also a contributory factor to maternal morbidity from a subinvoluted and imperfectly contracted uterus.

Of 130 samples of Ergot preparations of different types, *e.g.*, Liquid Extract of Ergot, Ammoniated Tincture of Ergot, Solid Extract, Ergot Powder etc.. tested in the Laboratory, 112 samples or 86·15 per cent. were found much below strength, and in 58 or 44·61 per cent. no active principles whatever could be detected.

Of the samples examined 103 were of indigenous manufacture and 27 of foreign make.

The causes underlying this state of affairs are not clearly understood. While the deterioration of the active principles of Ergot in the hot and humid climate of India may be an important factor in bringing about the poor quality of Ergot preparations, the opinion is expressed that it seems probable also that an inferior quality of both crude and finished preparations of Ergot, unsaleable in their countries of origin due to stringent drugs laws, are being purchased in India at a cheap price.

That the results obtained from these investigations are representative of the general quality of Ergot preparations all over India, will be evident from the fact that the samples subjected to analyses were obtained from practically all the Provinces of British India through the Surgeons-General, Inspector-General and other Heads of Medical Public Health Departments. A few were obtained direct from the Customs Office, within a few days of their importation, while another group of preparations were picked up at random from the open market.

The standardization of the Ergot preparations were carried out by pharmacologists and pharmaceutical chemists working in close co-operation. The ' Calorimetric Method ' of assay described in British Pharmacopœia, 1932, with the modification subsequently described in the Addendum to the British Pharmacopœia, 1936, was generally employed, and wherever necessary, the results were checked by the "rabbit-uterus" method of biological assay.

CORRESPONDENCE

The Editor is not responsible for any views expressed by the contributor.—ED.

IMMUNIZATION AGAINST TYPHOID

The Editor,

Journal of the I. M. A., Calcutta.

Dear Sir,

The enclosed letter taken from the *B. M. J.*, of January 1st, 1938, makes out a good case for the oral method of immunization against typhoid. It would be interesting to have the opinion of some of your readers on this method of prophylaxis. Personally I never advise the treatment as the injection method is so absolutely reliable, and almost entirely, with modern serum, free from untoward effects. Here in Karachi typhoid fever is endemic and assumes epidemic proportions yearly. It is possible that the chlorination of the water (which is the Karachi Municipality's method of sterilisation) may be the partial cause of patients' low resistance to enteric fevers. Chlorinization no doubt destroys the bacteriophages and thereby adds to the problem of acquiring immunity. This also is a matter on which your readers' opinions would be worthwhile.

Yours faithfully,

Victoria Road, Karachi. THOMAS DRAPER, M.R.C.S.,
15th December, 1938. F.R.C.P. (Ed.), (Lond.),

SIR,—I am in complete agreement with Professor Greenwood regarding the fallacies inherent in such statistics as those of typhoid immunization. This is especially so when the figures are compiled by medical men who are not necessarily expert statisticians. It is, however, possible to obtain a broad impression which, although not having the value of accurately compiled statistics, makes a reasonable appeal to common sense.

From the beginning of the war I had charge of the campaign against typhoid among both troops and civilians in Alsace and in some parts of the adjacent French territory. In these regions typhoid was endemic, and many cases occurred among the German troops when they were billeted in the villages. In spite of all efforts both before and after the beginning of the war—which efforts included the isolation of all bacilli carriers—typhoid continued to occur among the civil population, but not among the troops who had been vaccinated. It was, therefore, decided to enforce vaccination upon the civil population in a district where the disease had been prevalent for more than thirty years. After this vaccination no case of typhoid occurred in that district for the remainder of the war, and we were informed by the Civil District Medical Officer that this was the first time that this had happened. This was so much more surprising in that general conditions were much worse than during peace time.

After the war I received a grant from the Prussian Ministry of Health for the purpose of the study of oral immunization. There are two methods of oral immunization: the first is that of Besredka, where bile pills are given before the tablet of oral vaccine; and the second is that of von Wassermann and Neuberg, where sodium benzoate is used in place of the bile pill. Up till January, 1927, Besredka's method had been used in about 250,000 cases in both French territory and in Eastern Europe, good results being obtained in both places. In the town of Lodz, of 43,000 immunized people only forty-three became infected (0·1 per cent.), while among the 73,000 non-immunized people, 1,000 cases occurred (1·4 per cent.). In the last edition of his book (1937) Besredka gives further examples of the good results obtainable: 32,130 received vaccine, and there were six cases of typhoid; among 45,790 controls there were thirty-nine cases of typhoid. In an investigation carried out in Japan it was observed that in Tokyo, out of 42,094 who had received vaccine there were 229 cases of typhoid, and that out of 154,390 controls 1,624 developed typhoid; in rural districts, out of 77,810 who were given vaccine 306 subsequently developed typhoid, and in 267,109 controls there were 2,929 cases.

A report by Tchernozoubov showed that monovalent oral vaccines prepared from about 12 strains gave complete protection, no case after that occurring in three villages with populations totalling about 2,000 inhabitants. He stresses the advantage which lies in the fact that as many as 50,000 million organisms may be administered by this method, whereas no more than half this number may be injected. The fact that after oral immunization the Widal titre rises to 1:1,000 or 1:1,200 and remains as high as 1:200 or 1:400 after ten months shows that the antigenic properties are resorbed and are present in the circulation (Ruge). The method of von Wassermann was used in Germany and Jugoslavia. Hirsch (Jugoslavia) immunized 350 people by mouth, of whom not one became infected, while nine cases of typhoid occurred among 500 people of the same district who were not immunized; there were two cases among 2,000 people immunized subcutaneously. Mantey (Germany) carried out investigations in a city of 5,000 inhabitants where typhoid was endemic, and where 220 cases had occurred in four previous years. He gave oral immunization to 178 people who had been in contact with typhoid cases or carriers, but, despite this "isolation," two cases occurred among people who had not been immunized.

Apart from these examples the method was used in the Hanover outbreak in 1926, when 20,000 people were given oral immunization, but, as the method was not used until the latter part of the epidemic, no conclusions can be drawn from the protection obtained. The number included some hundreds of school children, and no complaints were received of any ill effects or reactions.

I feel that the method is worthy of trial in other instances, and that it is especially useful under the conditions of peace and among a civil population where the opposition to injection prevents the use of subcutaneous vaccination. It further avoids the inconvenience of those reactions which frequently follow the injection technique.

London, W.1, I am, etc.,
December 21, 1937. ERNST M. FRAENKEL.

THE HON'BLE MRS. VIJAYA LAKSHMI PANDIT

Minister of Public Health, U.P.

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